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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, PHILADELPHIA, AND THE NAT. HIST. SOCIETY OF PARIS; PRESIDENT OF THE LINNÆAN SOCIETY.

57236

THE FIGURES BY

JAMES SOWERBY, F.L.S.

——"VIRESQUE ACQUIRIT EUNDO."——VIRG.

VOL. II.

LONDON:

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MDCCXCIII.

ROYAL ASIATIC SOCIETY LIBRARY OF THE BOMBAY BRANCH OF THE

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Galium pusillum.

GALIUM pusillum.

Least Ladies-bedstraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat. *Seeds* two, roundish.

SPEC. CHAR. Leaves about eight in a whorl, rough, linear, pointed. Flower-stalks forked. Fruit smooth.

SYN. Galium pusillum. *Linn. Sp. Pl.* 154. *Hudſ. Fl. An.* 69. *With. Bot. Arr.* 154. *Villars Dauph. v.* 2. 324. *t.* 8.

NEITHER Ray nor Dillenius seems to have noticed this species of Galium, unless it be what the latter intended by *Gallium album supinum multicaule*, Rupp. Fl. Jen. 4. Raii Syn. 224. It does not well agree with Ruppius's description, which is however a very indefinite one, and it may nevertheless be the plant of Dillenius. This specimen was gathered in July last by Dr. Smith, at Matlock Bath, Derbyshire, where it grows abundantly, thriving much in the calcareous rocky soil originally deposited by the Matlock water. Mr. Hudson mentions the neighbourhood of Kendall in Westmoreland as its place of growth.

The root is perennial. Stems square, extremely numerous, from three to ten inches high, forming large tufts covered with innumerable milk-white flowers, very conspicuous at a distance. The leaves are tipped with a short pale bristle, and, as well as the stem, are generally, but not always, rough with short spreading hairs. They are not exactly linear, but rather lanceolate, from six to eight, or even nine, in a whorl, equally spreading; the lower ones so close together that they are almost imbricated; but that is by no means peculiar to this species. We have therefore omitted it in the specific character.

Our specimens agree precisely with those in the Linnæan Herbarium from Monſ. Gerard, except that his are rather less. There is no certain figure of this Galium extant, except the indifferent one of Monſ. Villars.

Geranium lucidum.

GERANIUM lucidum.

Shining Craneſbill.

MONADELPHIA Decandria.

GEN. CHAR. *Style* one. *Cor.* of five petals, regular. *Nectary* five glands at the baſe of the longer ſtamina. *Fruit* beaked, ſeparating into five arilli, each tipped with a long ſimple naked awn.

SPEC. CHAR. Stalks two-flowered. Calyx pyramidal, angular and rugged. Leaves roundiſh and five-lobed.

SYN. Geranium lucidum. *Linn. Sp. Pl.* 955. *Hudſ. Fl. An.* 304. *With. Bot. Ar.* 730. *Relh. Cant.* 262.

G. ſaxatile. *Raii Syn.* 361.

THIS beautiful ſpecies grows in the ſame ſituations as the G. robertianum, on walls, moiſt rocks, &c. but is not ſo common, except in the mountainous parts of Great Britain. It is a brilliant ornament to the romantic dells of Matlock and Weſtmoreland, decorating many a thatched roof and moſſy ſtone with its poliſhed red ſtems, and ſhining leaves, which often likewiſe turn red if expoſed to much light. It flowers throughout the ſummer. The root is annual. We are obliged to Mr. Robſon of Darlington for this ſpecimen.

In the ſpecies before us the arillus of the ſeed has ſeveral rugged longitudinal ribs, and is hairy at the top. This part is very important in determining the ſpecies of Geranium, and has not yet been well attended to, or botaniſts would never have been at a loſs to diſcriminate G. molle, pyrenaicum, puſillum and rotundifolium.

Polygala vulgaris

POLYGALA vulgaris.

Milkwort.

DIADELPHIA Octandria.

GEN. CHAR. *Cal.* of five leaves, two of them wing-ſhaped, and coloured. *Pod* inverſely heart-ſhaped, two-celled.

SPEC. CHAR. Flowers in a cluſter, creſted. Stems herbaceous, ſimple, procumbent. Leaves linear-lanceolate.

SYN. Polygala vulgaris. *Linn. Sp. Pl.* 986. *Hudſ. Fl. An.* 310. *With. Bot. Arr.* 754. *Relh. Cant.* 268.

Polygala. *Raii Syn.* * 287.

MILKWORT grows every where in dry heathy paſtures and on rocks, flowering in June and July. Its perennial woody root throws out many ſpreading procumbent ſtems, clothed with deep-green ſmooth leaves, which vary much in ſize and figure. The flowers, commonly blue, are often white, fleſh-coloured or purple, but in all caſes marked with green lines. The permanent calyx turns at length wholly green, and wraps up the young pod, cloſing and drooping to protect it from rain. So the elegant fringed creſt of the corolla ſhelters the ſtamina and piſtillum, admitting air, but ſcarcely wet or inſects.

An infuſion of the herb, which is very bitter, taken in a morning faſting, about a quarter of a pint daily, promotes expectoration, and is good for a catarrhous cough. I tried it at Montpellier by the advice of Profeſſor Gouan with ſucceſs, and have ſince known it uſeful. *J. E. Smith.*

Ajuga Chamæpitys.

AJUGA Chamæpitys.

Ground Pine.

DIDYNAMIA Gymnoſpermia.

GEN. CHAR. Upper lip of the *Corolla* very minute, and much ſhorter than the ſtamina.

SPEC. CHAR. Leaves three-cleft, linear, entire. Flowers ſeſſile, lateral, ſolitary. Stem diffuſe.

SYN. Teucrium Chamæpitys. *Linn. Sp. Pl.* 787. *Hudſ. Fl. An.* 247. *With. Bot. Arr.* 590. *Relh. Cant.* 220. *Dickſ. Dr. Plants*, 9.

Chamæpitys vulgaris. *Raii Syn.* 244.

Bugula foliis imis lincaribus, caulinis tripartitis. *Hall. Hiſt. n.* 284.

COMMUNICATED by Mr. Edward Forſter, junior, and Mr. Jacob Rayer, from Purfleet in Eſſex, in April and May laſt. It abounds in ſandy fields in Kent and Surry, but is otherwiſe a ſcarce plant.

Root ſmall, branched, annual. Stems much branched, ſpreading, ſquare, often reddiſh. The firſt two or three leaves are entire; all the reſt deeply three-cleft. The whole herb hairy, viſcid, aromatic, and bitter. The corolla differs in ſtructure from the genuine ſpecies of Teucrium; for the upper lip, inſtead of being deeply divided and divaricated, with the ſtamina projecting between its lobes, is very ſhort and notched, exactly as it ought to be in Ajuga, to which genus, called by him Bugula, it is therefore referred by Haller. Owing no implicit obedience to any ſyſtem or laws but thoſe of truth and nature, as far as they are diſcernible, we adopt his alteration * becauſe we think it a good one. In ſupport of his opinion he quotes Guettard, who indeed ſays this plant is no Teucrium, but who would reſtore Tournefort's genus of Chamæpitys, only calling it Iva with Rivinus. Tournefort's reaſon for ſeparating Chamæpitys from Ajuga (his Bugula) is, that its flowers are ſolitary, whereas thoſe of Ajuga are verticillated; but this is a moſt trifling and unſcientific difference, and not ſtrictly conſtant. Guettard and La Marck (Encycl. 501) ſay, the true Ajugas are diſtinguiſhed from the Teucriums by not having the calyx ſwelled on one ſide as the fruit ripens. This however is not true, witneſs A. alpina and pyramidalis, nor would it ſignify if it were. It muſt be acknowledged indeed, that the habit of Chamæpitys is unlike that of the Ajugas of Linnæus; but his Teucrium Iva, which belongs to the ſame genus, is the connecting link between them, by its pubeſcence and the denticulation of its leaves approaching Ajuga alpina, which is moreover a bitter aromatic plant.

* As Prof. Schreber has done, *Plant. Vertic. Unilab.* 19.

Scilla autumnalis

SCILLA autumnalis.

Autumnal Squill.

HEXANDRIA Monogynia.

GEN. CHAR. *Cor.* of ſix petals, ſpreading, deciduous. *Filaments* of equal thickneſs throughout.

SPEC. CHAR. Leaves linear. Flowers ſomewhat corymboſe, ſtanding on naked aſcending flower-ſtalks about their own length.

SYN. Scilla autumnalis. *Linn. Sp. Pl.* 443. *Hudſ. Fl. An.* 242. *With. Bot. Arr.* 349.

Hyacinthus autumnalis minor. *Raii Syn.* 373.

A NATIVE of dry paſtures in the ſouthern parts of England. The preſent ſpecimen was obligingly communicated from St. Vincent's rocks, near the hot-well, Briſtol, by Dr. John Ford, F.L.S. Owing to the moiſture of the preſent autumn, 1792, it is more luxuriant than uſual. The plant has formerly been found on ſeveral heaths near London, growing among ſhort graſs, and flowering in September, contrary to the nature of moſt bulbous plants.

The bulb is coated like an onion. Leaves numerous, ſpreading, two or three inches long, linear, obtuſe, channelled, ſcarcely filiform, though ſo deſcribed by Linnæus. Stalks ſometimes more than one, round, ſtriated, erect, terminated by ſix, ten, or even twenty flowers in a corymbus, which is ſoon lengthened out into a ſpike. The partial flower-ſtalks always point upwards, and after flowering become preſſed cloſe to the principal one. They are perfectly deſtitute of bracteæ. The petals are prettily variegated with blue and purple; the germen blue.

VICIA ſylvatica.

Wood Vetch.

DIADELPHIA Decandria.

GEN. CHAR. *Stigma* tranſverſely bearded on the lower ſide.

SPEC. CHAR. Stalks many-flowered. Leaflets oval. Stipulæ denticulated.

SYN. Vicia ſylvatica. *Linn. Sp. Pl.* 1035. *Hudſ. Fl. An.* 318. *With. Bot. Arr.* 774.

V. ſylvatica multiflora maxima. *Raii Syn.* 322.

THIS Vetch, hitherto ſuppoſed peculiar to the mountainous parts of England and Wales, has at length been found in a wood near Newmarket, by the Rev. Mr. John Hemſted, a very intelligent and induſtrious botaniſt of that place, from whom this ſpecimen was ſent us by William Matthew, Eſq. in the middle of June laſt. It flowers from that time to the middle of Auguſt. Dr. Smith gathered it in the hedges and thickets behind Saxton's bath at Matlock.

The perennial root throws out many weak, zigzag, ſtriated, and much branched ſtems, ſix or ſeven feet high, which climb among the neighbouring buſhes by means of compound tendrils at the ends of the leaf-ſtalks. The leaflets are exactly oval, or rather a little obtuſe, tipped with a minute briſtle; ſtipulæ very deeply toothed. Flowers very ornamental, whitiſh, elegantly ſtreaked with purple and greyiſh blue. The keel is generally white tipped with blue. The pods are lanceolate, pale brown, and ſmooth. They appear in July and Auguſt. Mr. Woodward's deſcription in the Bot. Arr. is a very accurate one.

Cardamine
impatiens.

CARDAMINE impatiens.

Impatient Ladies-ſmock.

TETRADYNAMIA Siliquoſa.

GEN. CHAR. *Pod* burſting elaſtically, the valves turning back. *Stigma* entire. *Cal.* a little ſpreading. One *Gland* on each ſide, between the ſhorter ſtamina and the calyx.

SPEC. CHAR. Leaves pinnated; leaflets lanceolate, moſtly cut. Stipulæ ciliated.

SYN. Cardamine impatiens. *Linn. Sp. Pl.* 914. *Hudſ. Fl. An.* 294. *With. Bot. Arr.* 685. vulgo Sium minus impatiens. *Raii Syn.* 299.

SENT by Dr. Smith from Matlock July 4th, 1792. It was gathered by the river ſide under a high perpendicular rock immediately below Saxton's bath. This is a rare plant in moſt places, though not ſo in Weſtmoreland and Cumberland.

Root annual. Herb about twelve or eighteen inches high, erect, pale and tender in appearance, with almoſt inviſible flowers, and chiefly remarkable for its numerous pods, which diſcharge their ripe ſeeds with great force on the ſlighteſt touch or motion. The ſtem is angular and hollow, more or leſs zigzag. Leaves ſmooth, paler beneath; extended at the baſe into two narrow, acute, ſingularly ciliated ſtipulæ, by which the ſpecies is well diſtinguiſhed from all others known. Linnæus at firſt deſcribed the flowers as being deſtitute of petals, but afterwards acknowledges he found ſome in a cultivated plant. Mr. Hudſon juſtly obſerves that ſome flowers are without, and that in thoſe which have them they are ſcarcely longer than the calyx, white, and of very ſhort duration.

The taſte of this ſpecies is pungent, like the reſt of its tribe, bitteriſh and unpleaſant. We do not know of its being applied to any uſe.

Thlaspi

THLASPI alpeſtre.
Alpine Shepherd's Purſe.

TETRADYNAMIA Siliculoſa.

GEN. CHAR. *Pouch* notched, with many ſeeds: valves boat-like, their keels forming the border of the fruit: partition contrary to the valves.

SPEC. CHAR. Pouch inverſely heart-ſhaped. Leaves glaucous, ſlightly dentated, embracing the ſimple ſtem; radical ones on footſtalks. Petals about the length of the calyx. Seeds numerous.

SYN. Thlaſpi alpeſtre. *Linn. Sp. Pl.* 903.
T. montanum. *Hudſ. Fl. An.* 282. *With. Bot. Arr.* 674.
T. foliis Globulariæ. *Raii Syn.* 305.

GATHERED by Dr. Smith, July 4th 1792, at Matlock, where it grows abundantly on the lime-ſtone rocks. 'Tis doubtful whether the root be more than biennial. Certainly Ray is miſtaken in ſaying it creeps. The radical leaves form a thick tuft, out of which ariſes one central ſtem, rarely branched, which flowers early in ſummer; the lateral ſtems are afterwards numerous, moſtly unbranched, and produce a ſecond crop of flowers in July and Auguſt, as in the Iberis nudicaulis. The whole herb is glaucous, ſomewhat ſucculent, bitter and pungent in taſte and ſmell, yet horſes and cows ſeem to feed it down. The petals are white, ſlightly notched, about the length of the calyx, ſometimes a little ſhorter or longer. Antheræ and calyx purpliſh. Seeds three or four in each cell.

Great confuſion, originating with Mr. Hudſon, has ariſen about the Engliſh ſpecies of Thlaſpi. This plant is certainly his montanum, though the alpeſtre of Linnæus, as appears from the Herbarium and deſcription of the laſt-mentioned author. The Linnæan montanum differs from ours, in having much larger petals, leaves more entire, a creeping root, and only one or at moſt two ſeeds in each ſide of the pod. Its antheræ too are yellow. We believe it to be a ſtranger to our iſland. Thlaſpi alpeſtre of Hudſon is really the perfoliatum of Linnæus, as it ſtood in the 1ſt edition of Flora Anglica, and is an annual branched plant, with dentated leaves and ſmall flowers. Thoſe who like to gueſs at hybrid plants might ſuppoſe our alpeſtre to be produced between perfoliatum and montanum; but we would not hazard any ſuch ſuppoſition, believing them three naturally very diſtinct ſpecies, only having ſeveral characters in common. The great fruitfulneſs of this ſpecies is a pretty poſitive proof againſt its being a hybrid.

It is neceſſary to remark that Dr. Withering, having taken up theſe plants from Mr. Hudſon, has much confuſed their hiſtory by miſapplying the accounts given of each in different authors.

Parnassia palustris.

PARNASSIA paluſtris.

Graſs of Parnaſſus.

PENTANDRIA Tetragynia.

GEN. CHAR. *Calyx* five-cleft. *Petals* five. *Nectaries* five, heart-ſhaped, fringed with briſtles terminated by little balls. *Capſule* with four valves.

SPEC. CHAR. . . .

SYN. Parnaſſia paluſtris. *Linn. Sp. Pl.* 391. *Hudſ. Fl. An.* 131. *With. Bot. Arr.* 325. *Relh. Cant.* 129.

P. vulgaris et paluſtris. *Raii Syn.* 355.

PERHAPS the nectary of the Parnaſſia paluſtris is more elaborate in ſtructure than that of any other Britiſh vegetable. We regret that its phyſiology is unknown. What ſhare thoſe capillary protuberances, tipped with pellucid globes, have in the formation of honey, is very doubtful, though that fluid is found about the lower part of the organ which ſupports them. Theſe parts however form an excellent generic character, and there is but one ſpecies of the genus. Theoretical botaniſts are not agreed about its affinities, except that it is allied to Droſera, and we think alſo to Dionæa and Saxifraga, though Mr. De Juſſieu ſeparates them all widely; but he ſeems not decided in his opinion. The Parnaſſia agrees with Saxifraga in the wonderful œconomy of its impregnation, which is performed by one of the ſtamina at a time coming over the ſtigma, and retiring again as ſoon as it has ſhed its pollen. Its place is then ſupplied by another, till all have preſented themſelves in turn, and then the ſtigma cloſes. Sometimes two come together, or nearly ſo. Rue exhibits the ſame phænomenon.

This plant is common on bogs in the northern counties as well as in Norfolk, and produces its elegant milk-white flowers in Auguſt and September. The petals are curiouſly veined with pellucid lines; they preſerve their whiteneſs when dried. The ſtem is angular and twiſted: root perennial.

MYRIOPHYLLUM ſpicatum.

Spiked Water-Milfoil.

MONOECIA Polyandria.

GEN. CHAR. Male. *Cal.* four-leaved. *Petals* four. *Stamina* eight. Female. *Cal.* four-leaved. *Petals* four. *Piſtilla* four. *Style* none. *Seeds* four, naked.

SPEC. CHAR. Male flowers in interrupted naked ſpikes.

SYN. Myriophyllum ſpicatum. *Linn. Sp. Pl.* 1409. *Hudſ. Fl. An.* 419. *With. Bot. Arr.* 1077. *Relh. Cant.* 361.

Potamogiton foliis pennatis. *Raii Syn.* 159.

NOT uncommon in ditches and ſtagnant pools, flowering in July and Auguſt, when its numerous red ſpikes, ſtanding erect above the ſurface, render it very conſpicuous. This ſpecimen came from the peninſula called the Iſle of Dogs, facing Greenwich Hoſpital.

The roots are ſaid to be perennial; they are long and ſlender. The ſtems are alſo very ſlender in their lower part, round and much branched upwards. Leaves in fours, ſpreading, very finely pectinated, always immerſed in the water. The flowers only riſe above the water, that their pollen may not be deſtroyed by it. Notwithſtanding Vaillant, in the year 1719, deſcribed this genus as having a corolla, Linnæus always perſiſted in denying its exiſtence; and our own writers have copied him without any alteration. Yet it is certain we have found four very evident red petals, equal to the ſtamina and piſtillum, and more than twice as long as the calyx. It is no leſs true that even the ſpecimens of M. verticillatum, though not thoſe of M. ſpicatum, in the Linnæan Herbarium, have petals, at leaſt in the male flowers. To account for this contrariety of deſcription, we muſt ſuppoſe that the corolla of theſe plants is either very caducous, or frequently wanting, an accident well known to happen in many other vegetables. In our plant the calyx is acute and finely ciliated; the petals obtuſe, concave and entire.

Sagittaria
sagittifolia.

SAGITTARIA ſagittifolia.

Common Arrow-head.

MONOECIA Polyandria.

GEN. CHAR. Male. *Cal.* three-leaved. *Petals* three. *Stamina* nearly twenty-four. Female. *Cal.* three-leaved. *Petals* three. *Piſtilla* many. *Seeds* many, naked.

SPEC. CHAR. Leaves arrow-ſhaped, acute.

SYN. Sagittaria ſagittifolia. *Linn. Sp. Pl.* 1410. *Hudſ. Fl. An.* 420. *With. Bot. Arr.* 1079. *Relh. Cant.* 362. Sagitta. *Raii Syn.* 258.

ONE of the moſt beautiful ornaments of our rivers, pools, and ditches throughout England is the Arrow-head. Its flowers are ſhort lived, the petals ſoon falling off; but there is a ſucceſſion of them through the months of July and Auguſt.

The root is perennial, conſiſting of a ſolid bulb or rather *tuber*, deeply fixed in the mud. Stems and footſtalks triangular, very ſpongy, by which they are ſupported in the water in conſequence of the air generated within them; they diſcharge a white milky juice, an uncommon circumſtance in aquatic plants. The female flowers are few in number, and compoſe one or two of the lowermoſt whorls on the flowering branch, the reſt being male. We have indeed obſerved three or four piſtilla in ſome of theſe male flowers; but whether they ever ripen is uncertain.

Thoſe leaves which grow under water are linear, and the plant varies much in ſize; hence many varieties, and pretended ſpecies of old authors. See Dr. Stokes's accurate deſcription in the *Bot. Arr.* above quoted.

CUCUBALUS Otites.

Spaniſh Campion.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* ſwelling. *Petals* five, furniſhed with claws, not crowned at the mouth. *Capſ.* three-celled.

SPEC. CHAR. Flowers dioicous. Petals linear, undivided.

SYN. Cucubalus Otites. *Linn. Sp. Pl.* 594. *Hudſ. Fl. An.* 186. *With. Bot. Arr.* 446. *Relh. Cant.* 168.

Lychnis viſcoſa flore muſcoſo. *Raii Syn.* 340.

THIS plant, the leaſt oſtentatious of all its tribe, is peculiar to dry, ſandy, and gravelly ſoils in a very few parts of England, chiefly Norfolk, Suffolk, and Cambridgeſhire. The flowers appear in July and Auguſt; and although very numerous, may, from their green colour, be eaſily overlooked among the panicles of ſurrounding graſſes. Our preſent ſpecimen was ſent from Bury by Wm. Matthew, Eſq.

The root is perennial and ſtrong, running deep into the ground, and producing many thick tufts of narrow, ſpatulate, entire, ſharp-pointed leaves, which are viſcid, and rough with minute, thick-ſet, curved and ſometimes ſtellated, hairs, as are likewiſe the ſtem and flowerſtalks. The ſtem is from one to two feet high, erect, viſcid in the upper part, and producing numerous little oppoſite tufts of pedunculated flowers, intermixed with membranous bracteæ. The flowers are male on one root, and female on another; but the former often produce abortive piſtilla (as in our figure), and the latter abortive ſtamina. We ſuſpect the number of ſtyles varies from two to five. We have found in both ſexes the ſame narrow entire yellowiſh petals, though they are ſaid to be ſometimes wanting; they are very much like thoſe of Saponaria lutea *Linn.* (Smith Spicil. t. 5.) to which this plant is allied in habit; but the capſule of that has only one cell. Fig. 1 and 2 repreſent the piſtilla of the female flowers; the others belong to the male.

SILENE quinquevulnera.

Variegated Catchfly.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* ſwelling. *Petals* five, furniſhed with claws, and with a crown at the mouth. *Capſ.* three-celled.

SPEC. CHAR. Flowers ſolitary, lateral, alternate; limb of the petals roundiſh and entire. Fruit erect.

SYN. Silene quinquevulnera. *Linn. Sp. Pl.* 595. *Hudſ. Fl. An.* 188. *With. Bot. Arr.* 449.

MR. Hudſon is our authority for conſidering this pretty plant as of Britiſh growth, having mentioned it in his 2d edition of Flora Anglica as a native of ſandy fields about Wrotham in Kent. It is commonly cultivated in flower-gardens, and may frequently be found almoſt naturalized on heaps of rubbiſh and other ſuch places.

From a ſmall fibrous annual root ariſe ſeveral flaccid ſpreading ſtems, round, hairy, and a little viſcid, as are alſo the leaves, though very ſlightly ſo. Numerous flowers ſpring in an alternate order from the boſoms of the upper leaves, erect, or but little divaricated, even when the fruit is ripe. The petals are remarkable for the deep red ſpot in their centre like a drop of blood, as if the flower had received five wounds; whence the name *quinquevulnera*.

It continues in flower from June till the end of Auguſt, and produces great plenty of ſeeds.

Silene anglica is ſometimes found with pale reddiſh ſpots on its petals; but its ſpecific character, greater degree of viſcoſity, and paler colour of all its parts, diſtinguiſh it from this ſpecies.

Aster Tripolium.

ASTER Tripolium.

Sea Star-wort.

SYNGENESIA Polygamia Superflua.

GEN. CHAR. *Receptacle* naked. *Seed-down* ſimple. *Cor.* with more than ten rays. *Cal.* imbricated, its lowermoſt ſcales ſpreading.

SPEC. CHAR. Leaves linear-lanceolate, entire, fleſhy, ſmooth, obſcurely three-nerved. Scales of the calyx ſomewhat membranous and obtuſe. Flowers corymboſe.

SYN. After Tripolium. *Linn. Sp. Pl.* 1226. *Hudſ. Fl. An.* 368. *Ait. Hort. Kew. v.* 3. 199. *With. Bot. Arr.* 915. *Relh. Cant.* 318.

A. maritimus cæruleus, Tripolium dictus. *Raii Syn.* 175.

A NATIVE of muddy ſea-ſhores and mouths of rivers in every part of our coaſt, gathered on Woldham marſh by Lord Viſcount Lewiſham Aug. 29.

Root perennial, with long fibres. Stems from ſix inches to three feet high, leafy, branched, and producing abundance of flowers, which are not unornamental. Sometimes theſe flowers are perfectly deſtitute of rays, as found at Purfleet by Mr. T. F. Forſter, junior, and at Lynn by Dr. Smith.—See the annexed ſpecimen. The rays, when preſent, as is commonly the caſe, are generally of a delicate pale purple; ſometimes they are white.

Dr. Stokes has obſerved this plant in *inland* ſalt-marſhes, and therefore ſuppoſes, with great probability, its preſence may be an indication of ſalt ſprings.

Potentilla fruticosa.

POTENTILLA fruticosa.

Shrubby Cinquefoil.

ICOSANDRIA Polygynia.

GEN. CHAR. *Calyx* in ten segments. *Petals* five. *Seeds* roundish, naked, affixed to a small dry receptacle.

SPEC. CHAR. Leaves pinnated. Stem shrubby.

SYN. Potentilla fruticosa. *Linn. Sp. Pl.* 709. *Hudſ. Fl. An.* 222. *With. Bot. Arr.* 531.

Pentaphylloides fruticosa. *Raii Syn.* 256.

SINGULAR in its genus for having a shrubby stem, three or four feet high, much branched, clothed with a brown bark, which cracks longitudinally, and falls off in scaly portions. The leaves cover the branches, and are alternate, pinnated, consisting of five, rarely seven, oblong entire leaflets, the uppermost pair of which are decurrent, but they never run upwards into the terminal one. Silvery hairs appear on several parts of the plant, especially along the edge and nerve of the back of the leaves, more slightly over their upper surface, and on the foot-stalks and flower-stalks. The flowers are bright yellow, solitary at the end of each branch, very ornamental; the five external leaves of the calyx oval, and remarkably large.

This plant, cultivated in almost every shrubbery for its beauty, being covered with flowers throughout the summer, grows wild abundantly in the romantic neighbourhood of the river Tees in the north of Yorkshire, where it was found in Ray's time, and from whence this specimen was sent by Mr. Robson of Darlington on the 14th of June last.

732.

Potentilla argentea.

POTENTILLA argentea.

Hoary Cinquefoil.

ICOSANDRIA Polygynia.

GEN. CHAR. *Calyx* in ten ſegments. *Petals* five. *Seeds* roundiſh, naked, affixed to a ſmall dry receptacle.

SPEC. CHAR. Leaflets five, wedge-ſhaped, jagged, downy beneath. Stem nearly erect.

SYN. Potentilla argentea. *Linn. Sp. Pl.* 712. *Hudſ. Fl. An.* 223. *With. Bot. Arr.* 532. *Relh. Cant.* 197.

Pentaphyllum erectum, foliis profunde ſectis, ſubtus argenteis, flore luteo. *Raii Syn.* 255.

THIS ſpecies, though reckoned by Ray among our rarer plants, is found in many parts of England on a gravelly ſoil, and is ſaid to indicate clay under the ſurface (Roſe's Botany, 382).

Its perennial root throws out many woody, round, half erect ſtems, a foot or more in height, and producing alternate leaves, whoſe upper ſides are green, the lower covered with ſnow-white cottony down, as are the calyx and upper part of the ſtem, which laſt is dichotomous, and aſſumes the form of a corymbus. The ſmall bright-yellow flowers appear in ſucceſſion from June to autumn. No other Britiſh Potentilla can be confounded with this. Its form and habit much reſemble the Tormentilla, except in being far more woody. The pure whiteneſs of its leaves, like that of the white poplar, renders this plant conſpicuous whenever it is diſturbed by wind or any other accident, and diſtinguiſhes it ſufficiently from all of the ſame tribe.

Campanula glomerata.

CAMPANULA glomerata.

Cluſtered Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-ſhaped, cloſed at the bottom by valves bearing the ſtamina. *Stigma* three-cleft. *Capſule* inferior, opening by lateral pores.

SPEC. CHAR. Stem angular, ſimple. Flowers ſeſſile, moſt of them in a terminal cluſter. Leaves ovate.

SYN. Campanula glomerata. *Linn. Sp. Pl.* 235. *Hudſ. Fl. An.* 96. *With. Bot. Arr.* 219. *Relh. Cant.* 94.

C. pratenſis, flore conglomerato. *Raii Syn.* 277.

A NATIVE of dry chalky paſtures, as Gogmagog hills, Newmarket heath, the neighbourhood of Marham in Norfolk, Bury in Suffolk, and various parts of Yorkſhire, Surrey, and other chalk countries, which its conſpicuous flowers adorn very copiouſly in the months of July and Auguſt.

The ſtem is never (we believe) branched, unleſs it happens to have been eaten off by cattle when young; it is erect, angular, hairy, from ſix to eighteen inches high. Leaves rough, pale but not hoary, beneath; the calyx, and even corolla, are ſometimes hairy, and the latter occaſionally varies from purple to white. Root perennial, with long fibres.

This plant is no contemptible ornament for rock-work, or flower-borders in dry ground, where little elſe will grow. A moiſt or rich ſoil makes the herb too luxuriant, the flowers pale and degenerate, taking awa its alpine habit.

TAMUS communis.

Black Bryony.

DIŒCIA Hexandria.

GEN. CHAR. Male. *Calyx* in ſix ſegments. *Cor.* none. Female. *Cal.* in ſix ſegments. *Cor.* none. *Style* three-cleft. *Berry* inferior, three-celled. *Seeds* two in each cell.

SPEC. CHAR. Leaves heart-ſhaped, undivided.

SYN. Tamus communis. *Linn. Sp. Pl.* 1458. *Hudſ. Fl. Ann.* 433. *With. Bot. Arr.* 1119. *Relh. Cant.* 370.

Tamnus racemoſa, flore minore luteo palleſcente. *Raii Syn.* 262.

COMMON in ſhady thickets, hedges, and woods in moſt parts of England, but not in Scotland, nor the more northern countries of Europe, though on the contrary it is found as far ſouth as Algiers and the Levant.

The root is blackiſh externally, whence its ancient denomination *Bryonia nigra*, and the Engliſh name. The ſtems twine about every thing in their way, and ſo aſcend without tendrils to the tops of the more lofty buſhes, which their feſtoons of tawny leaves and red berries decorate agreeably in autumn. Its flowers appear in June, the barren and fertile ones on ſeparate roots, which Mr. Goodyer, an obſerving and accurate friend of Gerarde's, ſeems firſt to have noted. See Ger. emac. 871. The berries are inſipid, root acrid, and its pulp ſcraped has been formerly uſed as a ſtimulating plaiſter.

Stellaria nemorum.

STELLARIA nemorum.

Wood Stitchwort.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* five-leaved, ſpreading. *Petals* five, cloven. *Capſule* one-celled, with many ſeeds.

SPEC. CHAR. Lower leaves heart-ſhaped, on foot-ſtalks; upper ones ovate, ſeſſile. Panicle dichotomous.

SYN. Stellaria nemorum. *Linn. Sp. Pl.* 603. *Hudſ. Fl. An.* 190. *With. Bot. Arr.* 455.

Alſine montana, folio Smilacis inſtar, flore laciniato. *Raii Syn.* 347.

CONFINED to moiſt woods and the borders of clear ſhaded ſprings in the moſt northern parts of England, as well as in the low-lands of Scotland, flowering in May. Mr. Robſon, to whom we are indebted for ſo many rare plants figured in this work, gathered the preſent ſpecimen in Cliff-wood near Darlington.

Root perennial, ſmall and creeping. Stems ſeveral, weak and lax, round, hollow, ſcattered here and there with hairs, chiefly in the upper part. Leaves pale green, tender and ſucculent. The numerous ſtar-like flowers are viſible at a diſtance, and of a delicate ſtructure when cloſely examined.

For the conſolation of fallible botaniſts we muſt remark that Linnæus in his Flora Lapponica (No. 186) confounds this plant with Alſine media and Ceraſtium aquaticum. The former may always be known, in all its numerous varieties, from this and every other plant of its natural order, by the hairy line on one ſide of its ſtem, firſt pointed out, if we remember right, by Mr. Curtis. The latter is diſtinguiſhed from our Stellaria by being viſcid, and much more hairy; its flowers much leſs conſpicuous; calyx more oval, and leſs membranous; panicle more leafy; and eſpecially by all the ſtem-leaves being ſeſſile, neither are they lengthened out into ſo long a point; not to mention its five ſtyles, which are very conſtant.

Stellaria nemorum thrives very well in Chelſea garden.

673.

Cerastium arvense.

CERASTIUM arvenſe.

Field Chickweed.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal.* five-leaved. *Petals* cloven. *Capſule* one-celled, burſting at the top.

SPEC. CHAR. Leaves linear-lanceolate, obtuſe, ciliated at the baſe. Corolla longer than the calyx.

SYN. Ceraſtium arvenſe. *Linn. Sp. Pl.* 628. *Hudſ. Fl. An.* 201. *With. Bot. Arr.* 478. *Relh. Cant.* 179.

Caryophyllus arvenſis hirſutus, flore majore. *Raii Syn.* 348.

FREQUENTLY found on a gravelly ſoil in many parts of England, more rarely in Scotland, on dry banks and waſte ground.

The root is perennial and creeping. Stems very numerous, procumbent at the baſe, and forming thick tufts, riſing to about four or five inches in height, alternately branched, round, leafy, each terminated by two or three large, white, not inelegant flowers, with heart-ſhaped veined petals. The whole plant is often very hairy, always more or leſs ſo, even in Linnæus's own Scanian ſpecimens, though he deſcribes the leaves as ſmooth. The germen is globular; capſule cylindrical, ſlender, ſhorter than the calyx, ſplitting into five narrow valves, pellucid and almoſt membranous.——It produces a profuſion of flowers from May to September.

1203.

Habenaria viridis.

SATYRIUM viride.

Frog Satyrion, or Orchis.

GYNANDRIA Diandria.

GEN. CHAR. *Nectary* an inflated roundiſh bag behind the flower.

SPEC. CHAR. Bulbs palmated. Leaves oblong, obtuſe. Lip linear, three-cleft, the middle ſegment ſmalleſt.

SYN. Satyrium viride. *Linn. Sp. Pl.* 1337. *Hudſ. Fl. An.* 386. *With. Bot. Arr.* 981. *Relh. Cant.* 335. Orchis palmata minor flore luteo-viridi. *Raii Syn.* 381.

IN meadows and paſtures, eſpecially in a gravelly or rocky ſoil, in moſt parts of England, flowering about May, June or July, but growing diſperſed, ſo as to be rarely found in any quantity together. We were favoured with this ſpecimen from near Luton Hoo, Bedfordſhire, by Mr. Sibley, a gentleman who has paid much attention to the Orchis tribe.

Dr. Stokes has given an excellent and full deſcription of this plant in the *Bot. Arr.* to which we have nothing to add, nor can the ſpecies be confounded with any other. The colour of the lip varying from yellowiſh green to brown, and its middle ſegment varying likewiſe in ſize, a common accident in this tribe, gave occaſion to Mr. Hudſon to deſcribe a Satyrium fuſcum, *Fl. An. ed.* 1. but on no ſufficient grounds, as the brown colour and the equally divided lip by no means conſtantly accompany each other, witneſs our figure.

HYOSERIS minima.

Swine's Succory.

SYNGENESIA Polygamia Æqualis.

GEN. CHAR. *Receptacle* naked. *Calyx* nearly equal. *Down* ſimple, or imperceptible.

SPEC. CHAR. Stem divided, deſtitute of leaves. Flower-ſtalks ſwelled upwards.

SYN. Hyoſeris minima. *Linn. Sp. Pl.* 1138. *Hudſ. Fl. An.* 346. *With. Bot. Arr.* 857. *Relh. Cant.* 300. Hieracium minimum Cluſii, Hyoſeris Tabernæmontani & Gerardi. *Raii Syn.* 173.

IN barren ſandy gravelly fields, but not common. Sent June 30th laſt from near Apſley and Ampthill, Bedfordſhire, by the Rev. Mr. Abbott; alſo from Walthamſtow, by Mr. E. Forſter, junior. It was long ago found by the ſide of Armingball wood near Norwich.

Root annual, but little branched. Leaves ſpreading on the ground, entire or irregularly toothed, rough, eſpecially on their edges. Stems three, four, or more, round, ſmooth, taper and purpliſh at the bottom, ſwelling gradually upwards, alternately branched, ſtriated, immediately under the flowers hollow and inflated, with here and there a few ſmall ſcattered, pointed, erect bracteæ. The flowers are ſolitary at the end of each ſubdiviſion of the ſtem, ſmall, erect, bright yellow. Corollæ very obtuſe and toothed. Seeds crowned with an elevated rim, more rarely with ſhort ſimple down.

Like all field plants it varies extremely as to luxuriance, in its moſt abject ſtate producing one ſimple ſolitary ſtalk with a ſingle flower, while in a more favourable ſoil it ſometimes bears ſix or more branched ſtems, many flowers, and leaves proportionably numerous and large. Hypochæris glabra is remarkable for the ſame phænomenon.

1021.

Onobrychis sativa.

HEDYSARUM Onobrychis.

Saint-Foin.

DIADELPHIA Decandria.

GEN. CHAR. *Keel* of the *Corolla* tranſverſely obtuſe. *Pod* jointed, with one ſeed in each joint.

SPEC. CHAR. Leaves pinnated. Pod ſingle-ſeeded, prickly. Wings of the corolla equal to the calyx. Stem elongated.

SYN. Hedyſarum Onobrychis. *Linn. Sp. Pl.* 1059. *Hudſ. Fl. An.* 322. *With. Bot. Arr.* 785. *Relh. Cant.* 277. *Martyn. Fl. Ruſt. tab.* 47.

Onobrychis ſeu Caput gallinaceum. *Raii Syn.* 327.

A NATIVE of chalky paſtures and open downs in various parts of England, always in dry barren ſituations, which its flowers greatly enliven about June and July.

The plant is readily diſtinguiſhed from all others of Britiſh growth; and if any doubt could remain, the ample and exact deſcriptions of Dr. Withering and Mr. Woodward muſt entirely remove it.

This is a valuable plant for cultivation in dry barren ſoils for feeding cattle, as it grows luxuriantly where graſs or corn would yield but a ſmall produce. Profeſſor Martyn mentions in his valuable Flora Ruſtica above quoted, that its cultivation began with us about the middle of laſt century, and though a native plant, its ſeeds were then procured from France and Flanders.

895.

Isatis tinctoria

ISATIS tinctoria.

Woad.

TETRADYNAMIA Siliculoſa.

GEN. CHAR. *Pouch* lanceolate, one-celled, ſingle-ſeeded, deciduous, with two boat-like valves.

SPEC. CHAR. Radical leaves crenated, ſtem leaves arrow-ſhaped. Pouch oblong.

SYN. Iſatis tinctoria. *Linn. Sp. Pl.* 936. *Hudſ. Fl. An.* 299. *With. Bot. Arr.* 717. *Relh. Cant.* 259. Glaſtum ſativum. *Raii Syn.* 307.

NOT a native of our iſland originally; at leaſt being according to Linnæus a maritime plant, and yet always found with us in and about cultivated fields; it ſhould ſeem to have become naturaliſed from its frequent culture for the purpoſe of dyeing blue. Yet we are told by Pliny the ancient Britons painted their bodies with it. If Pliny's plant be ours, which is very probable, it muſt be a native.

The root is biennial. Stem erect, branched, round, ſet with alternate ſomewhat ſucculent leaves. The radical leaves only ſtand on long footſtalks, and are crenated. Not only the corolla, but the calyx is yellow. The ſeed veſſels dark brown. A few hairs are ſometimes found on the ſtem and leaves. The flowers appear in July.

Although no admirers of whimſical innovation, eſpecially in an artificial ſyſtem, we cannot but think judicious corrections ſtrengthen any ſyſtem, and certainly lead to truth. We therefore adopt Profeſſor Schreber's alteration of Linnæus in placing this genus, with Bunias and Crambe, in the order *Siliculoſa*, to which they ſo evidently belong one is quite at a loſs to conceive on what principle they could be placed among *Siliquoſa*. Even Linnæus in his ſpecific characters of theſe plants uſes the term *ſiliculis*, and moſt ſyſtematic authors have placed them near Draba, Lepidium, &c.

Sanicula europea

SANICULA europæa.

Wood Sanicle.

PENTANDRIA Digynia.

GEN. CHAR. *Umbels* cluſtered in little heads. *Fruit* rough. Central *flowers* abortive.

SPEC. CHAR. Radical leaves ſimple. Flowers all ſeſſile.

SYN. Sanicula europæa. *Linn. Sp. Pl.* 339. *Hudſ. Fl. An.* 110. *With. Bot. Arr.* 266. *Relh. Cant.* 108. Sanicula ſive Diapenſia. *Raii Syn.* 221.

COMMON enough in woods, growing among dead leaves of trees, and flowering with the firſt heralds of ſummer in May. Gerarde ſays "it joyeth in a fat and fruitfull moiſt ſoile." He alſo remarks that "it is uſed in potions which are called Vulnerarie potions, or wound drinkes, which make whole and ſound all inward wounds and outward hurts." Unhappily the experience of mankind ſince good Gerarde wrote has rather impaired the credit of ſuch ſovereign medicines. Ignorance is ever prone to confidence and wonder. The herb is bitter and pungently aromatic, but ſeems to partake of that viroſe acrimony uſual in umbelliferous plants which "joy in a fat and moiſt ſoile," and which is improved to a wholeſome aromatic flavour in dry elevated ſituations.

The root is perennial, with long branched fleſhy fibres. Leaves moſtly radical, elegantly lobed and ciliated, deep green above, paler and more ſhining beneath. Stem twelve or eighteen inches high, but little branched, furrowed. Flowers often reddiſh. The central flowers of each little head or umbel have no ſtyles, but in their place a glandular nectary (*Withering*). The petals are all nearly equal; they are wanting in the ſeed-bearing flowers, as Scopoli remarks.

Bupleurum rotundifolium.

BUPLEURUM rotundifolium.

Thorow-wax.

PENTANDRIA Digynia.

GEN. CHAR. *Involucrum* longer than the umbels, five-leaved. *Petals* curled in. *Fruit* roundiſh, compreſſed, ſtriated.

SPEC. CHAR. No general involucrum. Leaves perfoliate.

SYN. Bupleurum rotundifolium. *Linn. Sp. Pl.* 340. *Hudſ. Fl. An.* 111. *With. Bot. Arr.* 267. *Relh. Cant.* 108.

B. perfoliatum rotundifolium annuum. *Raii Syn.* 221.

A SOMEWHAT unfrequent annual in corn-fields, generally preferring a dry and chalky ſoil. Mr. Lewin communicated it from the neighbourhood of Dartford in Kent.

This herb like the Sanicle has the reputation of being a vulnerary, a quality which no medicine can have, any otherwiſe than as a tonic ſtrengthening the conſtitution, nor can any external application be ſpecifically healing or conſolidating, nor be uſeful in any other way, than as a defence from the air.

The root is ſmall and fibrous. Stem alternately branched, a little zigzag, clothed with ſingularly perfoliate leaves, which have occaſioned the Engliſh name, from the old word *wax*, to grow. Both leaves and involucra are entire and ſharp-pointed. The flowers are yellowiſh and inconſpicuous, coming out in June and July. Every part of the herb is remarkably hard and rigid, and has a ſlight aromatic ſmell.

Ranunculus
Lingua.

RANUNCULUS Lingua.

Great Spear-wort.

POLYANDRIA Polygynia.

GEN. CHAR. *Cal.* five-leaved. *Petals* five, with a honey-bearing pore on the inſide of the claw of each. *Seeds* naked.

SPEC. CHAR. Leaves lanceolate. Stem erect.

SYN. Ranunculus Lingua. *Linn. Sp. Pl.* 773. *Hudſ. Fl. An.* 240. *With. Bot. Arr.* 572. *Relh. Cant.* 211.
R. flammeus major. *Raii Syn.* 250.

THIS has always been reckoned a very rare ſpecies of Ranunculus, yet it appears to belong to various parts of England. Mr. Robſon ſent this ſpecimen from near Darlington. Dr. Smith has obſerved it in ſeveral parts of Norfolk. It generally grows in muddy ditches, flowering in July, and the root is perennial.

The ſpecies is very nearly allied to R. Flammula, and like that varies with entire or ſerrated leaves; but all its parts are vaſtly larger, its ſtem erect, its leaves more ſharply pointed, and more ſeſſile. The hairineſs, which is but ſlight, is, as Linnæus obſerves, ſhort and cloſe preſſed to the leaves and ſtem: this laſt mark indeed does not diſtinguiſh it from R. Flammula. The flowers are of a bright golden colour, very conſpicuous.

Linnæus has called this ſpecies *Lingua*, becauſe Dalechampius gueſſed it to be the Lingua of Pliny; but ſuch conjectures are generally too ill founded to be depended upon, and ignorance is preferable to vague and ſuperficial information.

The herb is acrid like moſt of its tribe.

Ranunculus aquatilis.

RANUNCULUS aquatilis.

Water Crow-foot.

POLYANDRIA Polygynia.

GEN. CHAR. *Cal.* five-leaved. *Petals* five, with a honey-bearing pore on the inſide of the claw of each. *Seeds* naked.

SPEC. CHAR. Leaves capillary under water, above ſomewhat peltate.

SYN. Ranunculus aquatilis. *Linn. Sp. Pl.* 781. *Hudſ. Fl. An.* 243. *With. Bot. Arr.* 577. *Relh. Cant.* 216. *Raii Syn.* 249. n. 3, and n. 4, 5 and 6.

A VERY common but beautiful ornament of ponds and ditches, diſplaying its elegant white flowers above the ſurface of the water copiouſly in May, and more ſparingly throughout June and July. The root is perennial, and throws up long round ſtems, clothed with alternate leaves, with broad membranous ſtipulæ at the baſe of their footſtalks. Theſe leaves exhibit a very curious phænomenon, ſuch as grow under water being divided into fine capillary ſegments, while thoſe that ſwim on the ſurface are merely five-lobed and groſsly notched. Sometimes all the leaves are capillary, none of them emerging from the water, and in a ſtrong ſtream their outline is found much lengthened out, apparently from the action of the current. Hence the ſeveral varieties mentioned by Ray and others. The footſtalks of the floating leaves are often very long, probably ſtretched by ſupporting the plant. The nectary is tubular. The flowers vary a little in ſize occaſionally.

451.

Statice Limonium.

STATICE Limonium.

Sea Lavender.

PENTANDRIA Pentagynia.

GEN. CHAR. *Cal.* of one leaf, entire, plaited, filmy. *Petals* five. *Seed* ſingle.

SPEC. CHAR. Stalk panicled, round. Leaves ſmooth, deſtitute of nerves, tipped with a ſmall point.

SYN. Statice Limonium. *Linn. Sp. Pl.* 394. *Hudſ. Fl. An.* 132. *With. Bot. Arr.* 327.
Limonium. *Raii Syn.* 201.

GATHERED laſt Auguſt by Lord Viſcount Lewiſham on Woldham Marſh near Rocheſter. The plant loves a muddy ſoil in ſalt marſhes, or on the ſhores of great rivers waſhed by the tide, and flowers late. Scarcely any vegetable is more various as to luxuriance, being ſometimes found with leaves ſcarcely an inch long, and not more than ſix or eight flowers in the panicle, while at other times it is even much more large and its flowers more abundant than in the ſpecimen before us. The bright blue colour diſtinguiſhes it at a diſtance, and that colour is tolerably permanent. Though leſs magnificent than ſome foreign ſpecies of its genus, this is a very beautiful plant. Its appearance ſcarcely enough reſembles lavender to juſtify the Engliſh name, nor has it any aromatic quality. The root is ſtrong and perennial.

985.

Corydalis clavicultata.

FUMARIA claviculata.

Climbing Fumitory.

DIADELPHIA Hexandria.

GEN. CHAR. *Cal.* two-leaved. *Cor.* gaping. *Filaments* two, membranous, with three antheræ on each.

SPEC. CHAR. Pods linear. Leaf-ſtalks ending in a tendril.

SYN. Fumaria claviculata. *Linn. Sp. Pl.* 985. *Hudſ. Fl. An.* 309. *With. Bot. Arr.* 753.

F. alba latifolia. *Raii Syn.* 335.

THIS delicate plant is by no means frequent in England, though almoſt peculiar to our iſland. It loves a ſandy or gravelly ſoil in moiſt, ſhady, ſomewhat mountainous ſituations. This ſpecimen was gathered from a hedge ſeparating a wood and a meadow behind the Eagle Inn at Snareſbrook, near Woodford, Eſſex, where I have known it theſe five years. *James Sowerby.*

The root is annual. Herb weak and ſucculent in all its parts, and ſo tender in habit that no good ſpecimens can be obtained except they are inſtantly after gathering ſpread in a book, and ſo left till they are dry. The ſtem is flattened on one ſide. Leaves glaucous, paler beneath, pinnate, then pedate, the leaflets oval, ſharp-pointed and entire; their common footſtalk ending in an alternately compound tendril, which takes faſt hold of the neighbouring plants; another obſtacle to getting good ſpecimens. The pale greeniſh white flowers appear in June, followed by more till the end of July. The pods, which are very different in different ſpecies of Fumaria, in this are linear, or rather oblong, pointed and ſmooth, containing generally three ſeeds.

997.

Anthyllis Vulneraria

ANTHYLLIS vulneraria.

Kidney Vetch, or Ladies Finger.

DIADELPHIA Decandria.

GEN. CHAR. *Cal.* inflated. *Pod* roundiſh, clothed with the calyx. *Stamina* all connected at their baſe.

SPEC. CHAR. Herbaccous. Leaves pinnated, unequal. Heads of flowers in pairs.

SYN. Anthyllis vulneraria. *Linn. Sp. Pl.* 1012. *Hudſ. Fl. An.* 313. *With. Bot. Arr.* 765. *Relh. Cant.* 271. Vulneraria ruſtica. *Raii Syn.* 325.

WE have in a late number preſumed to animadvert on the fallacy of common report as to the vulnerary powers of vegetables, and here preſent a plant which has ſcarcely report to countenance its pretenſions, nor any thing elſe than a name, for which we meet with no authority but the account of John Bauhin, who, from the nature of his vaſt work, was obliged to truſt much to others. The plant however is highly worthy of conſideration as a food for cattle, thriving like the Saint-foin in dry chalky places, and being favourable to the production of milk, as indeed its natural affinities would appear to indicate.

It occurs in moſt of our chalk and lime-ſtone countries abundantly, flowering from June to Auguſt. The root is perennial and woody. Stems round, hairy, nearly a foot high, not quite erect, leafy, terminated by two heads of thick-ſet yellow flowers, with fingered bracteæ, and a membranous hairy calyx. One of theſe heads is lower than the other, and flowers earlier. The leaves are pinnated, approaching to a lyrate form; their leaflets very unequal in ſize, entire, of a fine green and nearly ſmooth above, hairy beneath and on their margin.

The flowers are ſometimes found ſcarlet, which Linnæus attributes to a red clay ſoil; he alſo mentions their becoming white in a white clay, but the latter variety we have not obſerved.

GALIUM boreale.

Croſs-leaved Ladies Bedſtraw.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat. *Seeds* two, roundiſh.

SPEC. CHAR. Leaves in fours, lanceolate, three-nerved, not hairy. Stem nearly erect. Seeds briſtly.

SYN. Galium boreale. *Linn. Sp. Pl.* 156. *Hudſ. Fl. An.* 70. *With. Bot. Arr.* 156.

Mollugo montana erecta quadrifolia. *Raii Syn.* 224.

THE Galium before us is one of the moſt eaſily determined, being diſtinguiſhed from the common *Aparine* by having four leaves only at each joint, and from every other Britiſh ſpecies by its hairy or briſtly fruit. It grows only in mountainous countries, in rocky ſhady places about rivers, very plentifully at Kirkby Lonſdale, and in other parts of Weſtmoreland, as well as in Scotland. Mr. Robſon ſent this ſpecimen from the county of Durham.

The root is long and ſlender, running deep among the ſtones, tinged with red, which colour it communicates to woollen. Stems much branched, rough to the touch as well as the leaves, though not hairy. The leaves are pale beneath, blunt, and very accurately three-nerved. Copious panicles of milk-white flowers terminate the ſtem in July, at firſt ſight appearing like thoſe of Galium Mollugo, eſpecially when growing among buſhes. The hairs on the fruit are ſlightly curved upwards, and of a whitiſh colour.

Geum rivale.

GEUM rivale.

Water Avens.

ICOSANDRIA Polygynia.

GEN. CHAR. *Cal.* in ten ſegments. *Petals* five. *Seeds* with a jointed awn.

SPEC. CHAR. Flowers drooping. Fruit oblong; awns twiſted and feathery.

SYN. Geum rivale. *Linn. Sp. Pl.* 717. *Hudſ. Fl. An.* 226. *With. Bot. Arr.* 538. *Relh. Cant.* 199.
Caryophyllata montana purpurea. *Raii Syn.* 253.

THIS moſt elegant plant has had the fortune to be reckoned much more rare than it really is. Moſt botaniſts mention it as a mountain production; but it occurs alſo in low lands not unfrequently, as in meadows between Norwich and Thorpe, Prior's Wood between Downham and Lynn, and other parts of Norfolk. It grows alſo in Canada, and Tournefort found it in the Levant. The flowers appear in June and July.

Root creeping, woody, reddiſh, aſtringent and very aromatic, with a clove-like ſmell, whence it has been found uſeful in intermittent fevers. Stem erect, round, bearing two or three ſmall leaves, divided and elegantly drooping at the top, with two or three flowers; but as the fruit ripens it becomes erect. The leaves are lyrate, with a large lobed terminal leaflet, and two or three pair of ſmall intermediate ones among the others. The petals are erect, and never expand. The rich combination of the dark-green wrinkled leaves, with the glowing red-brown of the ſtem and calyx, and ſingularly delicate colour of the petals, added to the graceful poſition of the flowers, render this one of the moſt picturesque of our native plants.

Cultivated in a dry barren ſoil it grows well, but the flowers become double and proliferous. Mr. Robſon, to whom we are obliged for this ſpecimen, mentions a variety with yellow flowers found in the woods of Yorkſhire, which Dr. Smith alſo obſerved at Matlock, and gueſſed it might be a hybrid between G. rivale and urbanum. Its awns are hairy as in the former, its habit, colour, and ſize more reſembling the latter.

Cnicus lanceolatus.

CARDUUS lanceolatus,

Spear Thiſtle.

SYNGENESIA Polygamia Æqualis.

GEN. CHAR. *Cal.* ovate, imbricated with ſpinous ſcales. *Receptacle* hairy.

SPEC. CHAR. Leaves decurrent, pinnatifid, hiſpid; their ſegments divaricated. Calyx villoſe. Stem hairy.

SYN. Carduus lanceolatus. *Linn. Sp. Pl.* 1149. *Hudſ. Fl. An.* 350. *With. Bot. Arr.* 868. *Relh. Cant.* 304. C. lanceatus. *Raii Syn.* 195.

AMONG the various tribes of thiſtles, many of them very intricate to a botaniſt, this is one of the moſt eaſily diſtinguiſhed, as well as the moſt common. All our road-ſides, banks and heaps of rubbiſh are occupied by it, of which it ſeems proudly to take poſſeſſion, to the excluſion of all vegetables beſides. Yet, as Dr. Withering obſerves, it is often a ſhelter and protection to other plants, and is one of the firſt to grow in places where many would not thrive. In other reſpects its uſe in the œconomy of nature is not very diſcernible, except that the ſeeds are eaten by ſmall birds, particularly the Gold-finch.

Root biennial. Stem erect, three or four feet high, firm, branched, ſtriated, ſlightly hairy, and covered like the back of the leaves and calyx with a cotton-like web. The leaves, white beneath, are green and very hiſpid on the upper ſide, decurrent at the baſe, and all their indentations are armed with ſtrong divaricating ſpines. It begins flowering in June, and laſts till winter.

Ophioglossum
vulgatum.

OPHIOGLOSSUM vulgatum.

Adder's Tongue.

CRYPTOGAMIA Filices.

GEN. CHAR. *Capſules* numerous, connected in a two-ranked ſpike by an enveloping membrane, roundiſh, burſting tranſverſely, deſtitute of a ring. *Seeds* many, very minute.

SPEC. CHAR. Leaf ovate, without veins, bearing the ſpike.

SYN. Ophioglossum vulgatum. *Linn. Sp. Pl.* 1518. *Hudſ. Fl. An.* 449. *With. Bot. Arr. v.* 3. 45. *Relh. Cant.* 386.

Ophioglossum. *Raii Syn.* 128.

HERE we have another vulnerary, which Ray ſays "is excellent, either taken internally or applied outwardly;" and that "an infuſion of its leaves in olive oil is famous for curing wounds and ulcers. The powder is good for ruptures." Gerarde remarks, that the above oil is of ſo beautiful a green, many have ſuppoſed it made of verdegris. It is at preſent out of uſe, though aſtringent and tonic; the ſhops abounding with much better medicines of that deſcription.

This ſingular vegetable is by no means very uncommon in boggy meadows, and is to be found in perfection about May, or not later than June. Mr. B. M. Forſter favoured us with this ſpecimen from a field at Walthamſtow. The whole herb is ſucculent and very ſmooth. Roots of a few ſimple fibres like thoſe of the Orchis tribe, from whoſe point of union ariſes a ſimple ſtem, with one or more buds for the next year. The ſpike, generally ſimple, is very rarely found cloven more or leſs deeply. When ripe it ſplits tranſverſely on each ſide into numerous little portions, from whoſe interſtices the ſeeds are diſcharged, the capſular valves being imbedded in the portions of the ſpike.

The genus has little connexion with ferns, except through the medium of the true Oſmundas—ſee Dr. Stokes's excellent remarks in the third volume of Bot. Arr. p. 46, &c. The Linnæan term *frons* cannot without violence be uſed in the genus of Ophioglossum, as there is no neceſſary connexion between the leaf and fructification, one ſpecies, *O. nudicaule*, if not more, having them on diſtinct ſtalks.

1060.

Hypericum elodes.

HYPERICUM elodes.

Marſh St. John's Wort.

POLYADELPHIA Polyandria.

GEN. CHAR. *Cal.* five-cleft. *Petals* five. *Filaments* numerous, united at the baſe into three or five ſets. *Capſule* roundiſh.

SPEC. CHAR. Styles three. Stem round, creeping, villous as well as the leaves, which are roundiſh.

SYN. Hypericum elodes. *Linn. Sp. Pl.* 1106. *Hudſ. Fl. An.* 334. *With. Bot. Arr.* 815. *Relh. Cant.* 289. Aſcyron ſupinum villoſum paluſtre. *Raii Syn.* 344.

SPONGY bogs in ſeveral parts of England produce this pretty ſpecies, nor has it been obſerved in any other country, except the northern part of France (Dalibard Pariſ. 234). This ſpecimen grew on Hayes common in Kent; Dr. Smith found the plant on Derſingham moor near Lynn, and Francis Borone in Cornwall.

The ſtem is round, and grows nearly proſtrate among wet moſſes and graſs, throwing out long fibrous perennial roots from the firſt three or four joints; its ſubſtance is ſpongy; its upper part downy. Leaves oppoſite, covering the ſtem, almoſt orbicular, blunt, rarely emarginate, entire, with about ſeven nerves, clothed, eſpecially on the back, with down compoſed of fine ſhort jointed hairs. The panicle, terminal at firſt, becomes lateral by the protruſion of the ſtem beyond it, and is dichotomous, rarely producing more than from five to ten flowers, which appear in July and Auguſt, ſeldom expanding except in bright ſunſhine. Calyx divided about half way, fringed with red glands, as are likewiſe the bracteæ. Petals with greeniſh ribs. Stamina in three ſets, divided about half way down into from three to five filaments. Styles three. Nectary of three little yellow glands at the baſe of the germen.

This, as Linnæus obſerves, is very nearly related to his H. tomentoſum, which however differs from elodes in having oblong leaves, the veins of which ſpring from the mid-rib, and not from the baſe, a much larger and more compound panicle, calyx and ſtamina more deeply divided, the former bearing black or purple glands.

Orchis pyramidalis.

ORCHIS pyramidalis.

Pyramidal Orchis.

GYNANDRIA Diandria.

GEN. CHAR. *Nectary* a ſpur behind the flower.

SPEC. CHAR. Bulbs undivided. Lip of the nectary in three equal ſegments, entire, with two protuberances, the horn long. Petals ovato-lanceolate.

SYN. Orchis pyramidalis. *Linn. Sp. Pl.* 1332. *Hudſ. Fl. An.* 382. *With. Bot. Arr.* 969. *Relh. Cant.* 332.

O, purpurea ſpica congeſta pyramidali. *Raii Syn.* 377. *tab.* 18.

GROWS in meadows and paſtures in a calcareous ſoil, more eſpecially on chalky downs, flowering later than moſt others of the Orchis tribe, ſeldom before July. The whole herb is, as Dr. Stokes remarks, of a ſilky gloſſineſs, and of an unſpotted paliſh green. Spike denſe, the buds erect; but as they open, the lowermoſt firſt, the flowers ſtand out horizontally, giving the ſpike a pyramidal form, which it loſes again when all the flowers are expanded. The eſſential character of this ſpecies conſiſts in two protuberances in the front of its lip near the baſe. Our figure repreſents the plant as it occurs in meadows; in chalk-pits and dry barren places it is ſmaller, the buds of a more deep blood-colour, and the ſpike more denſe. The flowers are rarely found white. When drawn up in woods or among buſhes, every part is more ſlender, ſtraggling, and pale than in the preſent ſpecimen.

Hutchinsia petræa.

LEPIDIUM petræum,

Mountain Pepper-wort.

TETRADYNAMIA Siliculoſa.

GEN. CHAR. *Pouch* notched, with many ſeeds: valves keeled, but not margined: partition contrary to the valves.

SPEC. CHAR. Leaves pinnated, entire. Petals not longer than the calyx, ſlightly notched.

SYN. Lepidium petræum. *Linn. Sp. Pl.* 899. *Hudſ. Fl. An.* 280. *With. Bot. Arr.* 670.

Naſturtiolum montanum annuum tenuiſſime diviſum. *Raii Syn.* 304.

WE are obliged for this rare little plant to John Adams, Eſq. who gathered the ſpecimen early in March 1793 on a limeſtone wall in a very warm ſituation about two miles from Pembroke. It is alſo ſtill found, as in Ray's time, on St. Vincent's rocks near Briſtol Hot-wells, as we are informed by Dr. John Ford.

Root biennial, taper and fibrous. Stem much and alternately branched, ſpreading. Leaves elegantly pinnated, or rather very deeply pinnatifid, with an odd lobe; their ſegments oval, or ſpatulate, more or leſs pointed, entire, ſmooth. Flowers in a corymbus, gradually lengthened out into a ſpike, very minute, erect. Calyx and corolla ſpreading, the leaves of the former ovate and concave; the petals ſomewhat obovate, but narrow, white, about the length of the calyx, or ſhorter, ſometimes, but not always, ſlightly notched at the tip. Stamina ſix, of which, from the ſmallneſs of the flower, the inequality can ſcarcely be perceived, but the ſhorteſt ſtand remote from the others. Pouch exactly oval, flat, with the remains of the ſtyle in a minute notch at the tip, ſmooth: valves boat-like, with a ſharp, but not dilated, keel. Seeds two in each cell, on ſlender foot-ſtalks.

This ſpecies has the proper pouch of a Lepidium. In ſome foreign ones that part ſo nearly approaches to the pouch of Thlaſpi in figure, it is ſcarcely poſſible to define the limits of the two genera.

Lathyrus Nissolia.

LATHYRUS Niſſolia.

Crimſon Graſs-vetch.

DIADELPHIA Decandria.

GEN. CHAR. *Style* flattened, downy above, broader upwards. Two upper ſegments of the *calyx* ſhorteſt.

SPEC. CHAR. Flower-ſtalks ſingle-flowered. Leaves ſimple. Stipulæ awl-ſhaped.

SYN. Lathyrus Niſſolia. *Linn. Sp. Pl.* 1022. *Hudſ. Fl. An.* 315. *With. Bot. Arr.* 770. *Relh. Cant.* 271. Catanance leguminoſa quorundam. *Raii Syn.* 325.

FOUND by the Counteſs of Oſſory in a wood near Ampthill park, and communicated by T. Vaux, Eſq. of Bedford.

The young plant, before flowering, is ſo like a graſs that even an experienced botaniſt might miſtake it for ſuch; and it certainly eſcapes notice frequently, as Ray obſerves, by that means, though we think he ſpeaks of this ſpecies as more common than it really is, in the borders of fields, among buſhes, &c.

Its ſimple graſſy leaves diſtinguiſh this from other plants of the ſame tribe. They are accompanied by a pair of very minute, awl-ſhaped, ſpreading ſtipulæ at their baſe. Sometimes, Mr. Hudſon ſays, two flowers are found on one footſtalk. They are of a beautiful rich crimſon, very elegant in appearance; the pods long, linear, nearly cylindrical, and ſmooth, with many ſeeds; the root annual. The flowers appear early in May.

Linnæus, in this inſtance, as in many others, has preſerved an old generic name, *Niſſolia*, given by Tournefort, as a trivial name, retaining its original feminine termination. Such trivial names, being ſubſtantives, ought always to begin with a capital letter. Many perſons, for want of underſtanding this, have accuſed Linnæus of writing falſe concords. Another example of the ſame is *Lotus Corniculata*; ſome ſuch word as *dictus* being always underſtood. We do not mean to commend ſuch trivial names, expreſſive adjectives being undoubtedly better.

Melampyrum pratense

MELAMPYRUM pratenſe.

Common Yellow Cow-wheat.

DIDYNAMIA Angioſpermia.

GEN. CHAR. *Calyx* four-cleft. Upper lip of the *Corolla* compreſſed, turned back at the margin. *Capſule* two-celled, oblique, burſting at one edge. *Seeds* two, gibbous.

SPEC. CHAR. Flowers lateral, leaning one way. Leaves in diſtant pairs. Corolla cloſed.

SYN. Melampyrum pratenſe. *Linn. Sp. Pl.* 843. *Lightf. Fl. Scot.* 324. *With. Bot. Arr.* 639.

M. ſylvaticum. *Hudſ. Fl. An.* 270.

M. ſylvat. flore luteo, ſive ſatureja lutea ſylveſtris. *Raii. Syn.* * 286.

MANY people, with the late Mr. Hudſon**, miſtake this for the M. ſylvaticum, apparently becauſe it grows generally in groves and thickets; but the true ſylvaticum is a native chiefly of alpine foreſts, and has much ſmaller flowers, the orifice of whoſe corolla is much more gaping.

Root branched, annual. Stem ſlender, divided into ſeveral oppoſite ſpreading branches, the largeſt uppermoſt, the terminal one firſt producing ſeveral pairs of flowers, accompanied towards the top by dentated purpliſh bracteæ. Corolla pale at the baſe, deep yellow towards the tip, its upper lip fringed with denſe hairs, the lower one ſtraight, not bent downwards as in M. ſylvaticum, as Dr. Stokes well obſerves. Palate with two deep yellow elevated plaits. The antheræ cohere together at their tips.

Linnæus ſays, the beſt and yelloweſt butter is made where this plant abounds. All authors have copied him, and we do not ſcruple to do the ſame, in hopes that ſomebody will in time be induced to make experiments on the ſubject in England, where this plant is far from uncommon, flowering all Summer long.

** The celebrated author of the Flora Anglica, after repeated paralytic attacks, departed this life May 23, 1793. His memory requires no ſtudied eulogium here, as every page of the preſent work is an index to his labours. May the writer of this leave no more errors behind him, as an author, or as a man!

Sphaerophoron compressum

LICHEN fragilis.

Brittle Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, ſcattered warts.
Female, ſmooth ſhields or tubercles, in which the ſeeds are imbedded. *Hedwig in With. Vol. 3. p. 29, &c.*

SPEC. CHAR. Shrubby, ſolid, branched, compreſſed, whitiſh. Shields terminal, depreſſed, producing black powder intermixed with fibres.

SYN. Lichen fragilis. *Linn. Sp. Pl.* 1621. *Hudſ. Fl. An.* 558. *With. Bot. Arr. V.* 3. 215. *Jacq. Miſc. V.* 2. 92. *t.* 9. *f.* 6. c. bad.
L. melanocarpus. *Swartz. Prod.* 147.
Lichenoides non tubuloſum ramoſiſſimum, fruticuli ſpecie, cinereo-fuſcum. *Raii Syn.* 65 ?
Coralloides alpinum, Corallinæ minoris facie. *Dill. Muſc.* 116. *t.* 17. *f.* 34.

FOUND on rocks and heaths in mountainous places, ſcarcely ever producing its ſhields except in moiſt ſhady ſituations. It was found in that ſtate at Tunbridge by Mr. T. F. Forſter, junr. in 1791, and by Dr. Smith, the following year, on the north ſide of the high rocks on Cromford moor near Matlock. We believe few perſons ſince Dillenius have ſeen theſe ſhields.

The moſt common appearance of the plant is a thick tuft of ſhort, erect, bluntiſh branches (fig. 1.) ſpreading on the rocks like a cruſtaceous Lichen. The flowering ſtems are widely different, an inch or two in height, more or leſs compreſſed, and much branched; each diviſion terminating in a ſingle ſhield, which when ripe produces a ſooty powder intermixed with black fibres; and the margin of which is formed of the common covering of the ſtem irregularly lacerated, and often growing out into young branches, or tubercles tipped with black. Many of the lateral branches have often a jointed appearance (fig. 2.), and are ſometimes tipped with black; but whether theſe or the ſmall warts occaſionally found on the flowering branches (fig. 3.) be the male fructifications of Hedwig, we have not ſeen enough to determine. The reddiſh colour ſometimes aſſumed by this and other Lichens, ſeems to be owing to an alkaline ſubſtance, probably the urine of animals.

Our quotation of Ray is taken on the authority of Dillenius, but ſeems more applicable to L. globiferus. We ſhould rather have gueſſed No. 13. of R. Syn. to be L. fragilis; but as that was inſerted by Dillenius, he cannot ſurely have interchanged theſe two ſynonyms.

LICHEN globiferus.

Globe Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, ſcattered warts.

Female, ſmooth ſhields or tubercles in which the ſeeds are imbedded.

SPEC. CHAR. Shrubby, ſolid, much branched, cylindrical, browniſh, and poliſhed. Shields terminal, globular, producing a ball of black conglutinated powder.

SYN. Lichen globiferus. *Linn. Mant.* 133.

L. globoſus. *Hudſ. Fl. An.* ed. 1. 460.

L. fragilis β. *Hudſ. Fl. An.* ed. 2. 558. *With. Bot. Arr.* 215.

Lichenoides non tubuloſum, ramulis ſcutellis nigris terminatis. *Raii Syn.* 66? See L. fragilis (114).

Coralloides cupreſſiforme, capitulis globoſis. *Dill. Muſc.* 117. *t.* 17. *f.* 35.

A NATIVE of mountainous rocky heaths, very abundant in Scotland, Wales, and on Cromford moor near Matlock.

This ſpecies forms tufts by far leſs denſe than thoſe of L. fragilis, from which it is very diſtinct, though much reſembling it; and the flowering ſtems are abundantly produced, riſing but little above the others. Its whole ſurface is poliſhed and ſhining, greyiſh when wet, brown when dry, the branches tipped with white. The ſtems and branches are cylindrical, not compreſſed; and the fructifications perfectly globular, not flattened, opening by a ſmall irregular orifice. They are ſcarcely ever ſurmounted by lateral ramifications; and in the bottom of their cavity (which never expands) is a round maſs of black powder, probably the ſeeds.

How far the powdery fructification and ſingular habit of this and the preceding might entitle them to be conſidered as a diſtinct genus from real Lichens, botaniſts are at preſent too little acquainted with the tribe to determine.

TILLÆA muſcoſa.

Moſſy Tillæa.

TETRANDRIA Tetragynia.

GEN. CHAR. *Calyx* three or four-cleft. *Petals* three or four. *Capſules* three or four, with many ſeeds.

SPEC. CHAR. Stems procumbent. Flowers three-cleft.

SYN. Tillæa muſcoſa. *Linn. Sp. Pl.* 186. *Hudſ. Fl. An.* 132. *With. Bot. Arr.* 132. *Roſe's Elem. (Appendix)* 448. *t.* 2. *f.* 2.

THE moſt dreary ſands are not always unprofitable to a botaniſt, their looſe and fluctuating ſurface being often arreſted for a while, and deſtined to afford ſupport to a tribe of plants whoſe conſtitution is fitted by the all-wiſe Creator to thrive beſt on the meagre nouriſhment they afford. Thus ſome of the vaſt African deſerts are turned to account by means of Meſembryanthemums, Cotyledons, and other ſucculent vegetables, and we have here a production nearly allied to the latter, which flouriſhes on the drieſt ſandy heaths, where few others would live, and at a ſeaſon when Moſſes and Lichens are dried up. Large tracts of the above deſcription in Norfolk, as Drayton, Cawſton and Mouſhold heaths, as well as Brandon heath in Suffolk, are enlivened by its red colour from the end of May to September. Mr. Roſe ſays this plant was firſt determined by the Rev. Mr. Bryant in 1766. Sir Thomas Cullum has found it near Bury, from whence our ſpecimen was ſent by W. Matthew, Eſq.

The root is ſmall, and annual. Stems after a while procumbent, round, becoming quadrangular when dry. Leaves oppoſite and ſtrictly perfoliate, very fleſhy, obtuſe, punctated, concave above, convex on the under ſide, ſoon turning red as well as the ſtem. The flowers are one or two together in the boſoms of the leaves, nearly ſeſſile, and ſometimes accompanied with a pair of ſmaller leaves, denominated *bracteæ* by Mr. Roſe. Calyx of three ſtill ſmaller leaves, diſtinguiſhable by their ſharp points. Petals 3, ovate, acute, pellucid, leſs than the calyx. Stamina and ſtyles ſtill ſhorter. Germens 3, ovate, each producing two ſeeds.

Although this plant is always triandrous, yet as the three remaining ſpecies of Tillæa have 4 ſtamina, we cannot (with Dr. Withering) accommodate the Engliſh ſtudent ſo far as to remove the genus from the fourth claſs, where Linnæus has placed it, to the third.

LITHOSPERMUM purpuro-cœruleum.

Creeping Gromwell.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* funnel-ſhaped, pervious, and naked. *Calyx* in five diviſions.

SPEC. CHAR. Seeds ſmooth. Corolla obtuſe, much longer than the calyx. Leaves lanceolate. Barren ſtems creeping.

SYN. Lythoſpermum purpuro-cœruleum. *Linn. Sp. Pl.* 190. *Hudſ. Fl. An.* 79. *With. Bot. Arr.* 190.

L. majus Dodonæi, flore purpureo, ſemine Anchuſæ. *Raii Syn.* 229.

MR. Latham of Dartford, the celebrated ornithologiſt, has favoured us with wild ſpecimens of this uncommon ſpecies of Lithoſpermum, collected by himſelf in a chalky ſoil not far from Greenhithe in Kent. It has hitherto been found only in two or three ſpots in the weſt of England, being moſt abundant in the more temperate parts of Europe.

The long woody perennial root produces many round, hairy, leafy ſtems, moſt of which are procumbent, and throw out roots: the flowering ones only are perfectly erect, and about 12 or 18 inches high. Leaves numerous, alternate, lanceolate, acute, clothed with ſhort cloſe-preſſed briſtles, which on the upper ſide of the leaf often ariſe from minute white tubercles or warts, as in many of this natural order. The beautiful flowers appear in April or May, ſtanding erect in a ſort of double leafy ſpike, whoſe extremities are a little curved downwards before flowering. Calyx hairy, divided to the baſe into five very narrow linear obtuſe ſegments. Corolla about twice as long (not ſeveral times longer), firſt purple, then blue, with a pale reddiſh tube; around its orifice are five blunt hairy ſwellings, which however do not cloſe it. The ſtamina are ſomewhat ſhorter than the tube, and united with that part half way up. Style about as long, with a ſlightly-notched ſtigma. Germen and ſeeds very ſmooth; the latter are frequently abortive, as in moſt plants that increaſe much by their roots.

PULMONARIA officinalis.

Common Lungwort.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* funnel-ſhaped, pervious. *Calyx* priſmatic, five-ſided.

SPEC. CHAR. Calyx nearly as long as the tube. Upper leaves ovate, acute, rough.

SYN. Pulmonaria officinalis. *Linn. Sp. Pl.* 194. *Hudſ. Fl. An.* 81. *With. Bot. Arr.* 193.

P. foliis Echii. *Raii Syn.* 226. *Ger. em.* 808.

HOWEVER common in every garden, the Pulmonaria is of very unfrequent occurrence with us in a wild ſtate, inſomuch that authors are not agreed about the identity of our Britiſh ſpecies (ſee Withering). We have fortunately obtained, by the favour of Mr. E. Robſon, a wild ſpecimen from near Darlington, which being compared with the Linnean herbarium, decides the P. officinalis, at leaſt, to be a Britiſh plant. Mr. Goodyer's plant from the New Foreſt is moſt probably the ſame. How far the real P. anguſtifolia *(Herb. Linn.)* may be ſpecifically diſtinct, we dare not determine. The P. maculoſa, *Ger. em.* 808. *f.* 1. ſhould ſeem to be a broad-leaved variety of ours, from whence the ſpecific character of Linnæus was taken, which we have ventured to alter that it may better accord with our ſpecimens, and indeed with his own, which exhibit the uſual appearance of the wild plant throughout Europe. In Italy nothing is more common in groves and thickets.

The root is perennial; ſtems ſimple, erect, near a foot high, angular and rough. Lower leaves much lengthened out at the baſe, of a light green; the upper ones only, which are ovate, and rather broad, being ſpeckled with white on the upper ſide. This however is a variable circumſtance. The flowers appear in April or May. The plant loves ſhade. Every part is mucilaginous; but its reputation as a cure for coughs, aroſe not from that circumſtance, but from its ſpeckled appearance, reſembling the lungs!

Much conformity is obſervable between the ſtructure of this flower and that of Lithoſpermum purpuro-cœruleum, *t.* 117. Indeed the genera of many of the *Aſperifoliæ* are ſomewhat too nearly allied.

Daphne Laureola.

DAPHNE Laureola.

Spurge Laurel.

OCTANDRIA Monogynia.

GEN. CHAR. *Calyx* four-cleft, reſembling a corolla, withering but permanent, encloſing the ſtamina. *Berry* with one ſeed.

SPEC. CHAR. Cluſters axillary, of about five flowers. Leaves lanceolate, ſmooth.

SYN. Daphne Laureola. *Linn. Sp. Pl.* 510. *Hudſ. Fl. An.* 167. *With. Bot. Arr.* 403. *Relh. Cant.* 157. Laureola. *Raii Syn.* 465.

THIS ſhrub, not unaptly reſembling a palm-tree in miniature, often occurs in woods and hedges. Its evergreen leaves are conſpicuous in Winter, and the flowers come forth early in March. In Summer the black berries remain for a conſiderable time.

Every part is remarkably ſmooth. The ſtem round, about three feet high, tough, but little branched, naked below, crowned at the ſummit with a tuft of leaves, among which grow bunches of green inconſpicuous flowers, of an unpleaſant ſmell, accompanied by ſeveral concave bracteæ, which ſoon fall off. This plant, though highly acrid, may be taken internally, and is recommended in worm caſes, but the doſe is very ſmall. See Dr. Withering.

Gardeners have lately learned to engraft upon this the Daphne Cneorum, by which that elegant and fragrant ſpecies is the more eaſily propagated.

Ranunculus parviflorus.

Knotha del. July 1794

RANUNCULUS parviflorus.

Small-flowered Crow-foot.

POLYANDRIA Polygynia.

GEN. CHAR. *Cal.* five-leaved. *Petals* five, with a honey-bearing pore on the inside of the claw of each. *Seeds* naked.

SPEC. CHAR. Seeds rough on the sides, with hooked tubercles. Leaves simple, hairy, jagged, their segments acute. Stem prostrate.

SYN. Ranunculus parviflorus. *Linn. Sp. Pl.* 780. *Hudſ. Fl. An.* 242. *With. Bot. Arr.* 577. *Relh. Cant.* 215.

R. hirſutus annuus flore minimo. *Raii Syn.* 248. *t.* 12. *f.* 1.

GATHERED about Lee-Bridge, near Walthamſtow, by Mr. B. M. Forſter, in May laſt. It is an annual of very humble growth, occurring ſometimes in dry gravelly places, but not frequently; nor does it obtrude itſelf on the notice of the paſſenger by any ſhewy bloſſoms, or elegance of form or colour.

The fibrous root throws out many proſtrate ſpreading branched ſtems, which are round, hollow, leafy, and clothed like the leaves with long, ſpreading, ſoft hairs. The footſtalks are rather long, and dilated at their baſe into a pair of membranous ſtipulæ; lower leaves ſlightly lobed, upper ones deeply ſo, and all crenate; but the trailing branches often produce, towards their extremities, ſimple lanceolate entire leaves. The flower-ſtalks ſtand ſolitary, oppoſite to the leaves, each bearing a very ſmall yellow flower, whoſe petals are ſo minute and fugacious, poſſibly ſo imperfect, they can rarely be ſeen in their proper form and number. This ſpecies is characterized very clearly by its compreſſed ſeeds, whoſe ſides are rough with thick-ſet tubercles, each of which ends in a hooked point. Theſe ſeeds ripen in June and July.

067.

Geranium sylvaticum.

T. Sowerby Del.t Aug.t 1793

GERANIUM ſylvaticum.

Wood Craneſbill.

MONADELPHIA Decandria:

GEN. CHAR. *Style* one. *Cor.* of five petals, regular. *Nectary* five glands at the baſe of the longer ſtamina. *Fruit* beaked, ſeparating into five arilli, each tipped with a long ſimple naked awn.

SPEC. CHAR. Stalks two-flowered. Leaves with five or ſeven ſharp lobes, deeply notched and ſerrated. Stem erect. Petals ſlightly notched.

SYN. Geranium ſylvaticum. *Linn. Sp. Pl.* 954. *Hudſ. Fl. An.* 302. *With. Bot. Arr.* 727.

G. paluſtre? *Roſe's Elem. (App.)* 441. *t.* 1.

G. batrachoides montanum noſtras. *Raii Syn.* 361.

COMMUNICATED from the county of Durham by Mr. E. Robſon. However common about woods, thickets and paſtures in the north of England, and in Scotland, this Geranium is very ſeldom met with in the ſouthern counties. Mr. Roſe, finding the Norfolk ſpecimens not anſwer exactly to the Linnæan characters, erroneouſly imagined his plant to be the *paluſtre*, miſled as it ſhould ſeem by the luxuriancy of his ſpecimens, their reddiſh flower buds, which is a variable circumſtance, and poſſibly by the petals being leſs deeply notched than Linnæus ſeems to deſcribe them; but in that reſpect, too, this and other ſpecies occaſionally vary. In his figure the petals are too round and entire.

In our ſpecimens, which agree exactly with Mr. Roſe's own herbarium in Dr. Smith's poſſeſſion, and differ in no material reſpect from that of Linnæus, the root is ſtrong and perennial; ſtems ſeveral, 2 or 3 feet high, roundiſh, angular when dried, covered with reflexed hairs, much branched, and terminated by numerous flowers. The leaves can ſcarcely be called *ſubpeltate*; they are hairy, with cloſe-preſſed hairs, pale beneath, and full of ſtrong zigzag veins. The inner leaves of the calyx have a membranous border; petals blunt, ſcarcely notched, hairy at the baſe; ſtamina all nearly equal; arillus of the ſeed hairy, with a brown elevated keel, but not rugged. The flowers laſt through June and July.

ALLIUM urſinum.

Broad-leaved Garlick, or Ramſons.

HEXANDRIA Monogynia.

GEN. CHAR. *Cor.* in 6 ſpreading ſegments. *Spatha* containing many flowers. *Umbel* denſe. *Capſule* ſuperior.

SPEC. CHAR. Stalk naked, triangular. Leaves lanceolate, on footſtalks. Umbel flattiſh on the top.

SYN. Allium urſinum. *Linn. Sp. Pl.* 431. *Hudſ. Fl. An.* 140. *With. Bot. Arr.* 344. *Relh. Cant.* 135.

A. ſylveſtre latifolium. *Raii Syn.* 370.

THIS plant is but too plentiful in woods and hedges throughout moſt parts of England. The milk of cows that eat it becomes intolerably nauſeous, from the well-known garlick flavour common to the whole genus, and peculiarly active in this ſpecies. Its roots conſiſt of long fleſhy fibres at the bottom of a ſlender bulb, and can ſcarcely be eradicated when they have once taken poſſeſſion of a ſpot of ground. Moiſt ſhady groves and thickets are its favourite habitation, and the copious ſnow-white flowers, enlivening many a ſhady dell, might be ſeen with pleaſure, if the odour of the herb, wherever it is bruiſed or trodden upon, did not ſo frequently infect the air around.

This is one of thoſe ſpecies of Allium whoſe leaves all ariſe from the root, and the only Britiſh one of that deſcription with broad leaves. Its characters indeed cannot be miſtaken. The ſtalk is occaſionally more or leſs acutely triangular, at leaſt in the upper part; ſpatha of two leaves; filaments all of equal breadth, and nearly equal in length. The flowers appear early in May, or in the more northern and mountainous counties ſomewhat later.

Lithospermum arvense.

LITHOSPERMUM arvenſe.

Corn Gromwell.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-ſhaped, pervious and naked. *Cal.* in five diviſions.

SPEC. CHAR. Seeds rugged. Corolla obtuſe, ſcarcely longer than the calyx.

SYN. Lithoſpermum arvenſe. *Linn. Sp. Pl.* 189. *Hudſ. Fl. An.* 79. *With. Bot. Arr.* 189. *Relh. Cant.* 76. Bugloſſum arvenſe annuum, Lithoſpermi folio. *Raii Syn.* 227.

FREQUENT in corn-fields and waſte places, flowering from May to July. The root is annual, ſmall, and not much branched; its bark abounding with a deep red dye, which ſtains paper, linen, &c. of the ſame colour, and is eaſily communicated to oily ſubſtances. Hence the name of Baſtard Alkanet, ſometimes given to this plant. Linnæus, in Flo. Suecica, ſays, the country girls in the north of Sweden uſe the root to paint their faces, by which they ſhould ſeem to be terribly deficient either in healthy natural bloom or in taſte.

The ſtem is often very much branched, round, rough, clothed with alternate, lanceolate, entire, rough and rigid leaves, in the axillæ of the uppermoſt of which the flowers ſtand ſolitary, nearly ſeſſile. The corolla is ſmall and white, with fine ſwellings around its orifice, exactly as in L. *purpuro-cæruleum*, t. 117. Very near the bottom of its tube ſtand the 5 very ſhort and minute ſtamina, on a level with the ſtyle, which is about half as long as the tube. The ſeeds are brown, rugged, and produced in great abundance, ſo that the plant is often a very troubleſome weed.

GNAPHALIUM rectum.

Upright Cudweed.

SYNGENESIA Polygamia-ſuperflua.

GEN. CHAR. *Receptacle* naked. *Down* feathery. *Cal.* imbricated; its marginal ſcales rounded, membranous and coloured. *Florets* all equal and tubular.

SPEC. CHAR. Stem erect, terminating in a leafy compound ſpike. Leaves linear-lanceolate, almoſt naked on the upper ſide.

SYN. Gnaphalium rectum. *Bauh. Hiſt. vol.* 3. *part* 1, *p.* 160.

Gn. ſylvaticum. *Hudſ. Fl. An.* 360. *With. Bot. Arr.* 895. *Relh. Cant.* 312. *Lightf. Fl. Scot.* 472. *Retz. Fl. Scand.* 156.

Gn. anglicum. *Raii Syn.* 180. *Ger. em.* 639.

A NATIVE of groves, thickets and paſtures in a light ſandy ſoil in many places, ſent from Bedfordſhire by the Rev. Mr. Abbot. It flowers in the latter part of Summer, and is eaſily perceived. The root is perennial.

We cannot but agree with Prof. Retzius, who, in his *Floræ Scandinaviæ Prodromus*, has diſtinguiſhed this from another ſpecies of Gnaphalium, with which Linnæus confounded it. The real Gn. *ſylvaticum* of the laſt named author, intended by him in Fl. Lapp. and Sp. Plant. is the Gn. *norvegicum* of Retzius, and Fl. Dan. 254, as appears from original ancient ſpecimens in the Herb. Linn. as well as from the ſpecific character; though it alſo appears from the Cliffortian Herbarium, now in the poſſeſſion of Sir J. Banks, and indeed from many of his ſynonyms throughout, that Linnæus confounded the two together, as many other botaniſts have done. As theſe ſpecies are unqueſtionably diſtinct, it becomes neceſſary to give ours another trivial name, and we have choſen that of John Bauhin for its aptneſs as well as its antiquity.

The real *ſylvaticum* is a native of alpine woods, and is what Mr. Lightfoot ſpeaks of as a variety (p. 472). We hope at ſome future period to give a figure of it; in the mean time Fl. Dan. t. 254, is a good repreſentation, which Mr. Woodward and Dr. Stokes truly remarked (*With.* 895.) did not well ſuit our lowland plant. That which it deſcribes differs from our Gn. *rectum* in having broader leaves, more attenuated however at the baſe, and leſs naked on the upper ſurface; and a ſhort denſe ſimple ſpike of flowers, with a blacker calyx.

1191.

Centaurea Calcitrapa

CENTAUREA Calcitrapa.

Star Thiſtle.

SYNGENESIA Polygamia-fruſtranea.

GEN. CHAR. *Receptacle* briſtly. *Down* ſimple. *Cor.* of the radius funnel-ſhaped, irregular, longer than thoſe of the diſk.

SPEC. CHAR. Flowers ſeſſile. Calyx with compound ſpines. Leaves pinnatifid, with narrow dentated ſegments. Stem hairy.

SYN. Centaurea Calcitrapa. *Linn. Sp. Pl.* 1297. *Hudſ. Fl. An.* 376. *With. Bot. Arr.* 946. *Relh. Cant.* 326. Carduus ſtellatus. *Raii Syn.* 196.

FOUND not unfrequently in a barren gravelly or ſandy ſoil in waſte ground, by road ſides, and ſimilar places, beginning to flower about Midſummer, and continuing in bloſſom till deſtroyed by cold, being rather tender, when it becomes bleached and blown about by the wind, diſperſing its ſeeds as it goes.

From one annual root ariſes a low, much-branched, and buſhy ſtem, ſtrongly furrowed, clothed with ſlender ſoft hairs, and covered with abundance of pale-green leaves, ſometimes alternate, ſometimes from luxuriance cluſtered under the branches. Theſe leaves are more or leſs deeply pinnatifid, their ſegments long, narrow, acute, and variouſly dentated; the uppermoſt are more ſimple, and ſcarcely divided at all. At each divarication of the ſtem is a ſeſſile flower, its calyx compoſed of very ſtrong, ſpinous, yelloviſh, poliſhed ſcales, pinnated with leſſer ſpines at the baſe of their terminal one. Corolla pale purple, the radiant florets not much larger than the fertile ones of the diſk. The ſeeds have ſcarcely any feather or down, though the receptacle is hairy.

The ſtamina of this plant are ſaid to be irritable, contracting when touched, and drawing their antheræ downward along the ſtyle, like thoſe of the artichoke; but we have never been able to detect this curious property.

Parmelia physodes

LICHEN phyſodes.

Inflated Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, ſcattered warts.

Female, ſmooth ſhields or tubercles, in which the ſeeds are imbedded.

SPEC. CHAR. Imbricated, the ſegments obtuſe, compoſed of a double membrane, and ſlightly inflated.

SYN. Lichen phyſodes. *Linn. Sp. Pl.* 1610. *Hudſ. Fl. An.* 533. *With. Bot. Arr. v.* 3. 187. *Relh. Cant.* 429.

Lichenoides ceratophyllon obtuſius et minus ramoſum. *Raii Syn.* 76. *Dill. Muſc.* 154. *t.* 20. *f.* 49.

NOT uncommon on trunks of trees, old pales, large ſtones, and barren ſandy moors, frequently growing ſlightly attached to the ſtems of heath, and very conſpicuous from its bleached white colour, and its elegantly divided and curled form, but the ſhields are very rarely indeed to be found. Our ſpecimen was gathered on Cromford Moor, near Matlock, by Dr. Smith, who is poſſeſſed of another from Malvern Hills, Worceſterſhire, in which (contrary to the remark of Dillenius) the powdery terminations (1) and the ſhields (2) are on the ſame individual plant. This powdery part, which Dr. Hedwig conſiders as the male flower, is frequently ſeen, though the ſhields are ſo very rare that we could hardly preſent the reader with a greater botanical curioſity. We are therefore inclined, from this circumſtance, and from the analogy of L. *ciliaris* (ſee *With. v.* 3. 30) to think the black warts (3) are rather the male flowers.

This ſpecies is remarkable for being always compoſed of two membranes, the undermoſt black, the upper white, with a conſiderable cavity between them. Sometimes the plant grows out into large cylindrical powdery protuberances, which are likewiſe hollow. Our figure repreſents a group of different individuals in various ſtates, not all from one root.

Dillenius, in his quotation of *Linn. Fl. Lapp.* confounds this with L. *centrifugus*.

Rumex acetosa.

J. Sowerby del. Aug.t 1793.

RUMEX Acetoſa.

Common Sorrel.

HEXANDRIA Trigynia.

GEN. CHAR. *Cal.* 3-leaved. *Petals* 3, cloſed. *Seed* 1, triangular.

SPEC. CHAR. Flowers dioecious. Leaves oblong, arrow-ſhaped.

SYN. Rumex Acetoſa. *Linn. Sp. Pl.* 481. *Hudſ. Fl. An.* 156. *With. Bot. Arr.* 375. *Relh. Cant.* 149. *Woodv. Med. Bot.* 193. *t.* 69.

Lapathum acetoſum vulgare. *Raii Syn.* 143.

A COMMON inhabitant of meadows and paſtures throughout this iſland, in almoſt all ſoils and ſituations, flowering early in June. The root is perennial, running deep into the earth, aſtringent, as in moſt of its tribe. Stem moſtly ſimple, erect, round, deeply ſtriated, from one to two feet high. The radical and lower ſtem-leaves on long footſtalks, with a membranous cylindrical ſheathing ſtipula, embracing the ſtem, and torn at the top; theſe leaves are of an arrow ſhape, entire, or but little undulated in their ſides, but at the baſe cut into two or three large ſharpiſh teeth, pointing backwards, and not (as in ſome ſpecies of Rumex) divaricated into a right angle with the outline of the leaf. The upper leaves are ſeſſile, gradually more entire, and at the top of the ſtem only ſlightly criſped at their baſe. A compound ſort of verticillate ſpike terminates the ſtem, its branches being alternate and nearly erect. The barren flowers are produced on a ſeparate root from the fertile ones; the calyx and corolla ſmall, nearly ſimilar in both. Stamina very ſhort, with large yellow antheræ. Styles ſhort, with large crimſon bearded ſtigmata. The whole herb is acid, with a degree of aſtringency, not unpleaſant nor unwholeſome, agreeing much with the different ſpecies of rhubarb, to which it is nearly allied.

CONVALLARIA verticillata.

Narrow-leaved Solomon's Seal.

HEXANDRIA Monogynia.

GEN. CHAR. *Cor.* 6-cleft. *Berry* ſpotted, 3-celled.

SPEC. CHAR. Leaves verticillate.

SYN. Convallaria verticillata. *Linn. Sp. Pl.* 451. *Fl. Dan. t.* 86, bad.

Polygonatum caule ſimplici, erecto, foliis verticillatis ellipticis. *Hall. Hiſt.* 1244.

P. minus. *Ger. em.* 903.

FOR this new and very intereſting addition to the catalogue of Britiſh vegetables we are indebted to Arthur Bruce, Eſq. Secretary to the Nat. Hiſt. Society of Edinburgh, who firſt found it, July 1ſt, 1792, in the Den Reehip, a deep woody valley, four miles north-eaſt of Dunkeld in Perthſhire. From his wild ſpecimens, aſſiſted by a recent garden one, for the diſſection of the flower, our figure was drawn.

The root is perennial, fleſhy, creeping horizontally among ſtones, in rocky, ſhady, alpine places. Stem erect, near 2 feet high, angular, ſtriated, naked at bottom, in the upper part clothed with copious leaves, which are lanceolate, bluntiſh, entire, ſmooth, glaucous beneath, with numerous parallel nerves, and ſtand, nearly ſeſſile, about 3 or 4 together in a whorl all the way up the ſtem, with here and there a ſtraggling leaf or two by itſelf. In weak plants moſt of them are merely oppoſite, with 2 or 3 whorls occaſionally. Stipulæ none. From ſeveral of the loweſt whorls ariſe ſolitary, branched, ſlender, drooping flower-ſtalks, each bearing two or three flowers, which appear in the middle of June, and are white, cylindrical, divided about a quarter of their length into ſix bluntiſh ſegments, bearded at the tip on the inſide. The ſtamina are as long as the tube of the corolla; ſtyle ſhorter; germen round, green; berry blue.

ANTIRRHINUM majus.

Great Snapdragon.

GEN. CHAR. *Cal.* 5-leaved. *Cor.* with a prominence at its baſe pointing downwards and bearing honey. *Capſule* two-celled.

SPEC. CHAR. Corolla not elongated into a ſpur. Flowers ſpiked. Capſules roundiſh.

SYN. Antirrhinum majus. *Linn. Sp. Pl.* 859. *Hudſ. Fl. An.* 274. *With. Bot. Arr.* 650. *Relh. Cant.* 243.

GATHERED on walls at Greenwich, where, as in other places in Kent, and about many of the older towns in the ſouth and eaſt parts of England, this magnificent ſpecies of Antirrhinum may be found in abundance, flowering from the end of May to the middle of July, or later. Ray has omitted this plant, and Mr. Hudſon has marked it with an aſteriſk, both conſidering it as of foreign origin; an idea which its being only occaſionally perennial with us, though now perfectly naturalized, ſeems to juſtify.

Root fibrous, producing a tuft of ſhort ſpreading leafy ſtems. Flowering ſtems erect, 12 or 18 inches high, ſtrong, leafy, round, ſmooth below, hairy and viſcid above, branched towards the bottom, but terminating in a ſimple denſe ſpike of flowers, which never appear till the ſecond year. The pedicles are ſhort, with a concave bractea at their baſe, and ſometimes a pair of narrow lanceolate bracteæ cloſe to the calyx, which conſiſts of five broad, concave, entire leaves, brown and viſcid on their outſide. The corolla is generally of a roſe-colour, ſometimes white, but always with a large yellow ſpot on the protuberant part of the under lip; the gardens poſſeſs a deep crimſon variety of great beauty, very ornamental to rock-work. The leaves are deep green, ſmooth, lanceolate, and entire, varying much in breadth.

The corolla in moſt ſpecies of this genus is ſo conſtructed that, when preſſed laterally between the finger and thumb, it gapes, cloſing itſelf again from elaſticity when left: hence the name *Snapdragon.*

ORNITHOGALUM umbellatum.
Common Star of Bethlehem.

HEXANDRIA Monogynia.

GEN. CHAR. *Cor.* of 6 petals, erect, permanent, from about the midway ſpreading. *Filaments* alternately broader at the baſe.

SPEC. CHAR. Flowers in a corymbus. Flower-ſtalks riſing above the top of the main ſtalk. Filaments tapering, entire.

SYN. Ornithogalum umbellatum. *Linn. Sp. Pl.* 441. *Huds. Fl. An.* 143. *With. Bot. Arr.* 347.

O. vulgare et verius, majus et minus. *Raii Syn.* 372.

THIS is ſuppoſed not to have been originally a Britiſh native, though now found in a ſtate of nature in ſome parts of Norfolk. Our ſpecimen was obligingly communicated from Babergh, near Norwich, by Mr. Wagſtaff.

The root is a white roundiſh bulb. Leaves ſeveral, linear, bluntiſh, and ſoon withering at the tip, concave on the upper ſide, with a white rib. Stalk round, ſmooth, 8 or 10 inches high, terminating in an erect corymbus (for it is by no means an umbel, and therefore Linnæus would have done well to have changed the old name) of 6 to 8 or 10 flowers, which appear in May. Bracteæ lanceolate, acute, membranous, and fading, about half as long as the flower-ſtalks. Petals of a pure enamelled white, with a green line along their backs, much ſpreading, and permanent. Stamina half their length, broad and flat, tapering to a ſharp point, not emarginate, but entire, as Haſſelquiſt, Mygind, and Linnæus himſelf obſerved; we have therefore, from his own MS. obſervations, corrected the ſpecific character. Germen turbinated, with ſix notches, and a ſhort, erect, ſimple ſtyle.

The roots are eatable when boiled, and much uſed as food in the Levant. Linnæus ſays, *Mant.* 364, they are the doves' dung which was ſold ſo dear during the ſiege of Samaria (2d *Book of Kings, ch.* 6, *v.* 25); though Olaus Celſius *(Hierobot. vol.* 2, *p.* 30) and many other critics take that term in its literal ſenſe. If Linnæus is right, we obtain a ſort of clue to the derivation of Ornithogalum *(Bird's-milk)* which has puzzled all etymologiſts. May not that denomination apply to the white fluid which always accompanies the dung of birds, and is their urine? One may almoſt perceive a ſimilar combination of colours in the green and white of this flower, which accords preciſely in that reſpect with the deſcription Dioſcorides gives of his Ornithogalum *.

* Since the above was written we have had the ſatisfaction of finding Linnæus gives the ſame explanation in his Lectures on the Natural Orders of Plants, publiſhed by Profeſſor Giſeke, Hamburg, 1792, p. 287.

Eleocharis
palustris

SCIRPUS paluſtris.

Marſh Club-ruſh.

TRIANDRIA Monogynia.

GEN. CHAR. *Glumes* chaffy, imbricated every way, all fertile. *Cor.* none. *Seed* one, beardleſs.

SPEC. CHAR. Culm round, naked. Spike ſomewhat oval, terminal.

SYN. Scirpus paluſtris. *Linn. Sp. Pl.* 70. *Hudſ. Fl. An.* 17. *With. Bot. Arr.* 46. *Relh. Cant.* 18.

Sc. Equiſeti capitulo majori. *Raii Syn.* 429.

VERY common every where in ditches, marſhes, and rivulets. The root is perennial, creeping, throwing out many yellowiſh fibres, and producing thick tufts of upright, cylindrical, ſmooth, naked ſtems, becoming ſtriated when dry, clothed at their baſe with a cloſe, blunt ſheath, which is inveſted with two or three other ſhorter, more membranous, and reddiſh ſheaths. The plant ſeems perfectly deſtitute of leaves. The ſpikes are ſolitary at the end of each ſtem, erect, oblong, appearing oval from the ſpreading of their ſcales in flowering, and ſometimes accompanied by a ſmall, membranous, cloſe-preſſed bractea. Glumes oval, ſolitary, acute, with a membranous edge. Filaments ſlender, as in all graſſy plants; antheræ large, yellow, projecting entirely beyond the glumes. Style ſhort, with three long, taper, downy ſtigmas. Seed roundiſh, ſmooth, yellow, with a brown apex. This Scirpus flowers in June and July, and varies very much in ſize occaſionally.

GENISTA anglica.

Needle Furze.

DIADELPHIA Decandria:

GEN. CHAR. *Ca'yx* two-lipped, with two teeth in the upper lip, and three in the lower. *Standard* oblong, bent backwards from the reſt of the flower.

SPEC. CHAR. Spines ſimple, not found on the flower-bearing branches. Leaves ovato-lanceolate.

SYN. Geniſta anglica. *Linn. Sp. Pl.* 999. *Hudſ. Fl. An.* 311. *With. Bot. Arr.* 759. *Relh. Cant.* 269. G. minor Aſpalathoides, ſive Geniſta ſpinoſa anglica. *Raii Syn.* 475.

COMMON on moiſt boggy heaths, flowering in May and June. It has the long, woody, branched, and creeping roots of moſt of its tribe; from which ariſe ſeveral buſhy, alternately branched ſtems a foot high, ſet with ſcattered ſharp ſpines, which the firſt year are leafy, as are alſo the flowering branches that ſpring out among them. Leaves oval, pointed, entire, a little revolute in the margin, ſomewhat glaucous, ſmooth. Flowers from a few of the uppermoſt axillæ, ſolitary, on ſhort footſtalks, of an elegant bright yellow; the keel is remarkably long; the wings and ſtandard turn green in drying. Pods oval, turgid, ſmooth, containing 10 or 12 ſeeds.

This ſpecies is ſuppoſed to be almoſt peculiar to Britain, though found alſo in Denmark (*Fl. Dan.* 619). We beg leave to think Fuchſius's figure 220, quoted by Dr. Stokes, was rather intended for G. germanica, as its compound ſpines and its habit evince.

Colchicum
autumnale

COLCHICUM autumnale.

Meadow Saffron.

HEXANDRIA Trigynia.

GEN. CHAR. *Cal.* a ſpatha. *Cor.* in 6 diviſions, tube ariſing from the root. *Capſules* 3, connected and inflated.

SPEC. CHAR. Leaves plane, lanceolate, and erect.

SYN. Colchicum autumnale. *Linn. Sp. Pl.* 485. *Hudſ. Fl. An.* 157. *With. Bot. Arr.* 379. *Woodv. Med. Bot.* 483. *t.* 177.

C. commune. *Raii Syn.* 373.

SOME meadows in Suffolk produce the Colchicum, and that in but too great abundance for the intereſt of the grazier. It is alſo ſaid to be found in various parts of the north and weſt of England. This ſpecimen was gathered by W. Matthew, Eſq. of Bury.

The plant before us exhibits a mode of fructification ſcarcely paralleled among Britiſh vegetables. The flowers appearing very late in autumn, the impregnated germen remains latent under ground quite cloſe to the bulb till the following ſpring, when the capſule riſes above the ſurface, accompanied by ſeveral long upright leaves, and the ſeeds are ripened about June, after which the leaves decay (ſee Dr. Withering's remarks in *Bot. Arr.*). What therefore appears to be flower-ſtalk, is only the tube of the corolla, as in the Crocus. Several flowers are encloſed in one membranous ſpatha.

Its qualities agree with thoſe of ſquills (ſee With.).

If we may diſſent from ſuch authority as M. de Juſſieu, we cannot but think this genus more nearly allied to Crocus than to Veratrum (*Juſſ. Gen.* p. 47). His accurate account of its propagation by root may ſerve to explain that of bulbous plants in general, and of the Orchideæ.

LITHOSPERMUM officinale.

Common Gromwell.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-ſhaped, pervious, and naked. *Cal.* in five diviſions.

SPEC. CHAR. Seeds ſmooth. Corolla ſcarcely longer than the calyx. Leaves lanceolate.

SYN. Lithoſpermum officinale. *Linn. Sp. Pl.* 189. *Hudſ. Fl. An.* 79. *With. Bot. Arr.* 189. *Relh. Cant.* 76.

Lithoſpermum, ſeu Milium Solis. *Raii Syn.* 228.

FOUND here and there flowering in May, in a dry, gravelly, or chalky ſoil. Root perennial and ſtrong. Stems erect, roundiſh, rough with cloſe-preſſed briſtles, and clothed with alternate, lanceolate, entire leaves, which are ſlightly revolute in their margin, hairy beneath, rough above with minute cartilaginous tubercles, as in many of this tribe. Each of the numerous flowering branches terminates in a recurved leafy ſpike of pale yelloviſh flowers; in the ſeeding ſtate theſe branches become erect, much elongated, and the leaves they bear are conſiderably enlarged, being broader than thoſe on the ſtem. It is ſeldom that more than two ſeeds are perfected in each flower. They are exquiſitely poliſhed, of a grey or yelloviſh hue, very hard, but brittle, ſeeming of a ſtony ſubſtance; whence the generic name, and whence alſo the ancient celebrity of theſe ſeeds as a cure for the ſtone, though it is difficult to imagine on what principle ſtony ſubſtances ſhould be given as a cure of that complaint. The excellent Ray, too credulous in medical matters, celebrates them, truſting to others for that honeſty and judgment in their ſtudies which he exerciſed in his own. Others have aſſerted that the ſeed effervesces with acids; but Linnæus *(Flo. Suec.)* contradicts this, and we have carefully made the experiment without ſucceſs.

Ranunculus arvensis

RANUNCULUS arvenſis.

Corn Crowfoot.

POLYANDRIA Polygynia.

GEN. CHAR. *Cal.* five-leaved. *Petals* 5, with a honey-bearing pore on the inſide of the claw of each. *Seeds* naked.

SPEC. CHAR. Seeds rough on the ſides, with prominent points. Leaves once or twice three-cleft, in linear ſegments.

SYN. Ranunculus arvenſis. *Linn. Sp. Pl.* 780. *Hudſ. Fl. An.* 242. *With. Bot. Arr.* 576. *Relh. Cant.* 215. *Brugnon Mem. de l'Acad. de Turin, vol.* 4. 109. *tab.* 3.

R. arvorum. *Raii Syn.* 248.

THIS ſpecies of crowfoot occurs in corn-fields not unfrequently, flowering in June. The root is annual and fibrous. Stem erect, very much branched, ſlightly hairy, as are the leaves. Every part has a pale appearance, and the flowers are ſmall. The ſeeds are remarkably armed on the ſides with ſtrong prominent ſpines, larger towards the margin, and projecting much more than thoſe of R. parviflorus (t. 120), though ſometimes like them terminating in a minute hook.

Few plants poſſeſs more acrimony than this. M. Brugnon, in the place above quoted, relates its poiſonous effects on ſheep, who nevertheleſs eat it greedily, as do cows and horſes. It occaſions colic, gangrene of the ſtomach, and death in a few hours. Three ounces of the juice killed a dog in four minutes. M. Brugnon thinks vinegar the beſt antidote. Happily this plant generally grows with us where it is not acceſſible to cattle of any kind; but the huſbandman would do well to guard againſt it in fallow fields, and paſtures in the neighbourhood of corn-land.

Cuppia maritima

RUPPIA maritima.

Sea Ruppia.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Cor.* none. *Seeds* 4, on foot-ſtalks.

SPEC. CHAR. .....

SYN. Ruppia maritima. *Linn. Sp. Pl.* 184. *Hudſ. Fl. An.* 77. *With. Bot. Arr.* 177.

Potamogiton maritimum gramineis longioribus foliis, fructu ferè umbellato. *Raii Syn.* 134. *t.* 6. *f.* 1.

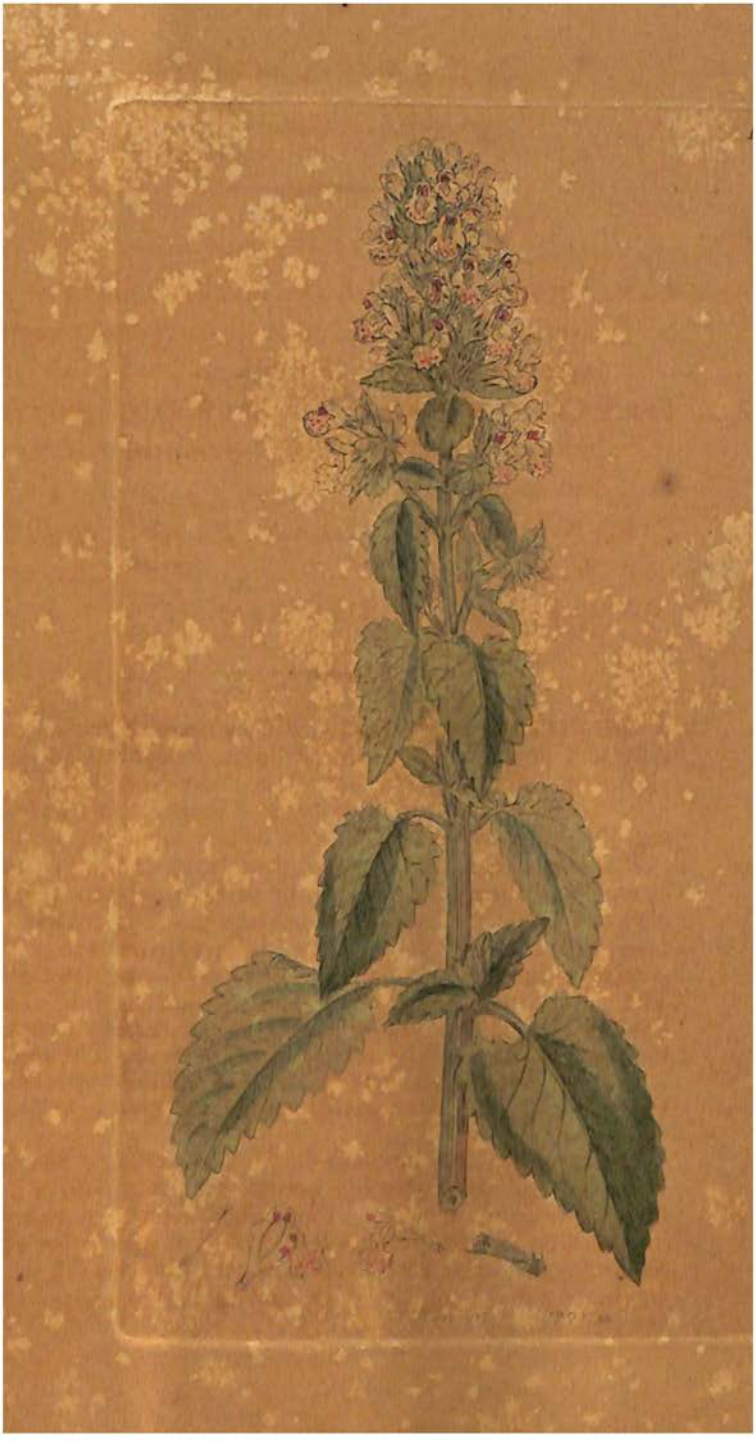
Fucus ferulaceus. *Ger. em.* 1573, good.

A GOOD obſerver may, we believe, find this curious plant in moſt of our Britiſh ſalt-water ditches, eſpecially in the latter part of ſummer, when its pedunculated ſeeds diſtinguiſh it from all vulgar pond-weeds. Mr. E. Forſter, jun. favoured us with this ſpecimen from a ditch by the road from Maldon to Goldhanger, where Ray obſerved it.

Whether the root be annual or perennial is not eaſy to determine. The ſtems are long and ſlender, round, very much branched, clothed with alternate linear pointed leaves, which embrace the ſtem with a membranous ſheath at their baſe. Two flowers commonly ſtand ſeſſile, one a little above the other, on an axillary flower-ſtalk, various in length, and ſometimes coiled, by means of which they alone are raiſed above the water when the pollen is ripe. The antheræ are ſeſſile, burſting at top into two hemiſpheres; the germens ſeem ſcarcely pedunculated before impregnation, but are afterwards raiſed in a wonderful manner from the receptacle, each on its own proper foot-ſtalk. The ſeeds are oval, ſlightly gibbous on one ſide, eſpecially when young. They ripen in Auguſt.

The account in Ray's Synopſis, written by Dillenius, is incorrect in ſaying the flowers (or ſtamina) grow remote from the fruit, and that the latter appears firſt.

Potamogeton marinum moſt reſembles the Ruppia, but even before flowering it may be diſtinguiſhed by its leaves for the moſt part being not ſo membranous, and alſo leſs tumid, at the baſe. We have in the Linnæan Herbarium a ſpecimen from Dr. Hope of that variety mentioned in Lightfoot (*Append.* 1091), which ſeems to differ from ours merely in the greater length of its ſpiral flower-ſtalk, poſſibly having grown in deeper or more fluctuating water. Its ſeeds are indeed ſpotted with red, which we have never obſerved in any other ſpecimen.



NEPETA Cataria.

Nep, or Cat-mint.

DIDYNAMIA Gymnoſpermia.

GEN. CHAR. *Cor.* with the middle ſegment of its lower lip crenate: orifice with a reflexed margin. *Stamina* approaching each other.

SPEC. CHAR. Flowers ſpiked; the whorls ſlightly pedunculated. Leaves on foot-ſtalks, heart-ſhaped, dentato-ſerrated.

SYN. Nepeta Cataria. *Linn. Sp. Pl.* 796. *Hudſ. Fl. An.* 249. *With. Bot. Arr.* 593. *Relh. Cant.* 221. N. major vulgaris. *Raii Syn.* 237.

FOUND about hedges and road-ſides, in a chalky or gravelly ſoil, in various parts of England, though ſeldom very plentifully. It is not unfrequent throughout Norfolk and Suffolk, flowering about the latter part of ſummer, and thriving well though covered with duſt, like Ballota nigra.

The root is perennial, long, and thready, of a blackiſh colour externally. Stems ſeveral, two or three feet high, ſquare, clothed with heart-ſhaped petiolated leaves, which are groſsly, and more or leſs acutely, ſerrated. Every part, except the corolla, is inveſted with a ſoft, ſhort, velvet-like downineſs. The calyx is marked with ſtrong green prominent ribs. That repreſented at the bottom of our plate is accidentally reverſed, the ſhorter teeth being (in nature) the lowermoſt. The corolla is white or purpliſh, its lower lip elegantly ſprinkled with crimſon or purple dots. Its crenated central lobe marks the genus decidedly.

Every part of this herb exhales, when bruiſed, a pungent aromatic ſmell, ſomewhat like penny-royal, with which it is ſuppoſed to agree in virtues. Cats delight in this ſcent almoſt as much as in the powdered root of Valeriana officinalis. Wherever they meet with the Nepeta, they entirely deſtroy it, by chewing the young branches, and rolling themſelves upon the plant as long as any ſmell is left.

Seseli Libanotis.

ATHAMANTA Libanotis.
Mountain Stone-Parſley.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* ovato-oblong, convex, ſtriated. *Petals* uniform, inflexed, ſo as to ſeem notched. *Involucrum* both general and partial.

SPEC. CHAR. Leaves bipinnated, flat. Umbels hemiſpherical. Seeds hairy.

SYN. Athamanta Libanotis. *Linn. Sp. Pl.* 351. *Relh. Cant.* 113 *fig. With. Bot. Arr.* 283. *Hudſ. Fl. An. ed.* 1. 100.

A. Oreoſelinum. *Hudſ. Fl. An.* 115. *With. Bot. Arr.* 283.

Apium petræum ſeu montanum album. *Raii Syn.* 218.

IN the time of Ray, this plant was known to grow wild on Gogmagog hills, Cambridgeſhire; but from that period no botaniſt has met with it there till the year 1783, when it was detected by the Rev. Mr. Relhan, to whom we are obliged for the wild ſpecimen here repreſented. Whether the plant Mr. Hudſon gathered between St. Albans and Stoney Stratford be the ſame, we have no means of determining: probably it might. That gentleman rightly referred Ray's plant to the A. Libanotis in his firſt edition; but in the ſecond, miſled as it ſhould ſeem by Linnæus in Sp. Pl. he calls it A. Oreoſelinum, a very different ſpecies, as appears from the Linn. Herb. Hence aroſe the miſtake of Dr. Withering, who has both plants in his Bot. Arr.

The root is perennial, running perpendicularly down, ſomewhat woody, bitteriſh, and pungent, bearded at the top with the fibrous remains of old leaf-ſtalks. Stem one or two feet high, erect, little branched, ſmooth, angular, and (as Ray obſerves) often very deeply furrowed. Leaves bipinnate: leaflets ſeſſile, pinnatifid, with pointed entire lobes, firm, veiny, paler beneath, ſmooth, except a ſlight hairineſs on the veins and margin. Footſtalks dilated at the baſe, with a membranous border. Umbels terminal, erect, whitiſh. Involucra numerous, ſubulate, with a membranous margin, hairy. Flower-ſtalks, calyx, and germen, hairy, as is likewiſe the fruit. After flowering, the ſtyles and top of the germen become purple, as Linnæus remarks. The umbels are ſometimes proliferous. This plant blooms copiouſly in Auguſt. We have repreſented a magnified flower to ſhew the inflexion of the petals, and the half-ripe fruit with its purple divaricated ſtyles.

Sium angustifolium.

SIUM anguſtifolium.

Narrow-leaved Water Parſnep.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* nearly oval, compreſſed, ſtriated. *Involucrum* general and partial, of many leaves. *Petals* heart-ſhaped, uniform.

SPEC. CHAR. Leaves pinnated; leaflets irregularly lobed and ſerrated. Umbels on foot-ſtalks oppoſite to the leaves. Stem erect.

SYN. Sium anguſtifolium. *Linn. Sp. Pl.* 1672. *Hudſ. Fl. An.* 119. *With. Bot. Arr.* 292. *Relh. Cant.* 116.

S. erectum. *Hudſ. Fl. An. ed.* 1. 103.

S. ſive Apium paluſtre, foliis oblongis. *Raii Syn.* 211.

THIS is frequently found in ditches and rivulets, and, having been originally conſidered by Linnæus as a variety of S. latifolium, was firſt eſtabliſhed as a diſtinct ſpecies by Mr. Hudſon. The Rev. Mr. Relhan ſent this ſpecimen from near Cambridge. It flowers in July and Auguſt.

Root perennial, creeping, ſo as to occupy much ſpace. Stem upright, with whorls of radical fibres in its lower part under water, round, ſtriated, ſmooth, much branched above. Leaves alternate, ſimply pinnated; leaflets ſeſſile, the lowermoſt pair remote from the reſt, and ſmaller, at leaſt in the lower leaves, in which alſo the leaflets are obliquely heart-ſhaped at the baſe; otherwiſe they are lanceolate, often ſo deeply lobed as to become haſtate, pointed, very irregularly and ſharply ſerrated, and very ſmooth. The umbels ſtand ſolitary, oppoſite to each leaf, on divaricated footſtalks ſomewhat ſhorter than the adjoining leaf. General involucrum of many drooping leaves, which are occaſionally entire, ſerrated or pinnatifid; the partial ones are oval and more entire. Calyx of five minute teeth. Petals heart-ſhaped, with an inflexed claw from the ſinus, all uniform. Stamina twice as long as the corolla, ſpreading. Fruit ſmooth, ſlightly ribbed, oval.

Lobelia Dortmanna.

LOBELIA Dortmanna.

Water Lobelia.

SYNGENESIA Monogamia.

GEN. CHAR. *Cal.* 5-cleft. *Cor.* of one petal, irregular. *Capſule* inferior, with 2 or 3 cells.

SPEC. CHAR. Leaves linear, 2 celled, entire. Stem almoſt naked.

SYN. Lobelia Dortmanna. *Linn. Sp. Pl.* 1318. *Hudſ. Fl. An.* 377. *With. Bot. Arr.* 950. *Lightf. Fl. Scot.* 505. *t.* 21.

Gladiolus lacuſtris. *Ger. em.* 105. Dortmanni. *Raii Syn.* * 287.

THE beautiful lakes of Weſtmoreland and Cumberland abound with this elegant and ſingular plant. Their gravelly bottoms are generally covered with thick tufts of its leaves, the flowering part of the ſtem being all that riſes above the water; ſo that in ſudden floods it is ſometimes entirely overflowed, not having, like ſome vegetables, the means of accommodating itſelf to ſuch quick changes, either by a more or leſs inclined poſition, or a ſpiral ſtructure. Dr. Woodville favoured us with this recent ſpecimen from Keſwick Lake. The plant grows alſo in Wales and Scotland, flowering in July.

Root of long ſimple whitiſh fibres, perennial. Leaves almoſt wholly radical, linear, entire, and very blunt, recurved, ſmooth, chiefly remarkable for their internal ſtructure, as they conſiſt of two longitudinal hollow cells with a partition between. Stem erect, ſimple, varying in length according to the depth of the water wherein it grows, round, ſmooth, hollow, terminated by a ſimple upright looſe ſpike or racemus of elegant pale purpliſh drooping flowers, ſtanding on ſhort foot-ſtalks with a ſmall blunt bractea at the baſe of each. The ſegments of the corolla are ſlightly bearded at their baſe, as are the antheræ at their tip. The ſtigma too is ciliated. The germen in ripening becomes erect; an example, among innumerable others, ſhewing it is not the weight of drooping flowers that makes them take an inclined poſition; the fruit of ſuch, though much the heavier, being almoſt always upright, for the ſeeds are thus more ſurely retained till ripe, and then more extenſively ſcattered; whereas by the inclined corolla, or rather, in this genus, by the incurved figure of the antheræ themſelves, the pollen is ſheltered from wet.—This herb abounds with milky juice.

1129.

Dioti s maritima.

SANTOLINA maritima.

Sea Cotton-weed.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* imbricated, hemiſpherical.

SPEC. CHAR. Flower-ſtalks collected into a corymbus. Leaves oblong, obtuſe, crenated, very downy.

SYN. Santolina maritima. *Linn. MSS. Hudſ. Fl. An.* 356. *With. Bot. Arr.* 886.

Athanaſia maritima. *Linn. Sp. Pl.* 1182. *Mant.* 2. 464.

Gnaphalium maritimum. *Raii Syn.* 180.

THIS ſpecimen was gathered laſt Auguſt by Dr. Smith, on the ſea beach, juſt above high-water mark, a mile to the north of Landguard Fort in Suffolk, where this rare plant grows in tolerable plenty, and flowers from the middle of Auguſt to the latter part of September. It occurs alſo on various parts of our ſouthern coaſt.

The long perennial roots run very deep into the ſand, and throw up ſeveral branched buſhy ſtems about a foot high, extremely brittle, round, covered with numerous, alternate, oblong, almoſt ſpatulate, crenate leaves, which, as well as the ſtem and calyx, are completely inveſted with a pure-white thick cottony web. A corymbus of bright yellow flowers terminates the ſtem and ſide branches. The calyx is formed of numerous concave, ſomewhat membranous, ſcales; and the hemiſpherical receptacle is ſet with ſimilar ſcales, woolly at their tip. The florets are numerous, all tubular, regular, hermaphrodite and fertile. Seeds oval, curved, compreſſed, ſharp and membranous at the edge, deſtitute of wing or down. Every part, eſpecially the flowers, has a ſtrong aromatic ſcent, like Coſtmary (Tanacetum Balſamita).

Thoſe who go to look for theſe flowers in July, according to the information of authors, will be diſappointed. All the figures of this plant, Miller's not excepted, are extremely bad.

Phyteuma
orbiculare.

PHYTEUMA orbicularis.

Round-headed Rampion.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-ſhaped, in five linear ſegments. *Stigma* three-cleft. *Capſule* three-celled.

SPEC. CHAR. Flowers in a roundiſh head. Leaves ſerrated; the radical ones heart-ſhaped.

SYN. Phyteuma orbicularis. *Linn. Sp. Pl.* 242. *Hudſ. Fl. An.* 97. *With. Bot. Arr.* 220.
Rapunculus corniculatus montanus. *Raii Syn.* 278.

WE are obliged to Thomas Cornwall, Eſq. of Chalk Park Surrey for this ſpecimen, gathered wild in that county, in ſeveral parts of which, as well as in Suſſex and Hampſhire, this rare plant is found abundantly on a chalky ſoil, and flowers about July or Auguſt. It is one of our more elegant and ſingularly conſtructed productions, and may be cultivated without trouble in a dry gravelly or calcareous ſituation, though we muſt own the rich blue of its flower-buds is moſt conſpicuous in a wild ſtate.

The long woody root branches near the ſurface of the ground into ſeveral diviſions, each bearing a denſe tuft of petiolated, ſmooth, veiny, ſerrated, or rather crenated, leaves, the firſt of which are heart-ſhaped, the reſt ovato-lanceolate, and from the centre of which ariſes a ſimple erect ſtem, ſlightly angular, and clothed with alternate lanceolate leaves, the uppermoſt of them very acute, and ſomewhat recurved. A ſingle round head of flowers ſtands erect on a few ovate, acute, ciliated bracteæ. The parts of fructification agree in ſtructure with the genus of Campanula, except that the corolla is divided to the very baſe, into five linear ſpreading ſegments, which in the bud cohere together, forming a curved horn, and ſeparating firſt at their lower part. Every part of the flower remains permanent, though faded, till the ſeeds are diſperſed, or longer. The herb is milky, but not acrid.

Galium cruciatum.

GALIUM cruciatum.

Croſs-wort.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of one petal, flat. *Seeds* two, roundiſh.

SPEC. CHAR. Leaves in fours, ovate, hairy. Stem ſimple above, hairy. Bunches of flowers lateral, with two leaves. Flowers polygamous. Fruit ſmooth.

SYN. Galium Cruciata. *Scop. Carn.* 100. *With. Bot. Arr.* 149.

Valantia Cruciata. *Linn. Sp. Pl.* 1491. *Hudſ. Fl. An.* 441. *Relh. Cant.* 377.

Cruciata. *Raii Syn.* 223.

THIS grows every where about hedges and thickets, flowering early in ſummer. The root is perennial, creeping and ſlender. Stems branched at their baſe, but perfectly ſimple in the upper part, weak, and reſting againſt buſhes, quadrangular, very hairy, jointed, and bearing at every joint four ovate, entire, ſoft, hairy leaves, from whoſe boſoms all the way up the ſtem ariſe ſeveral ſlender, forked, many-flowered peduncles, each furniſhed with two ſmall leaves at its firſt divarication. The flowers are formed exactly like thoſe of other ſpecies of Galium, except that ſome are only male, wanting a germen, and of the complete or hermaphrodite ones, ſome are five-cleft. The ſtyle is deeply cloven, and the rudiments of ſeeds two, though one generally proves abortive, and the fruit becomes globoſe, ſmooth, and is ſheltered by the reflexed leaves.

That this plant belongs to the natural genus of Galium there can be no doubt: ſee the queſtion well diſcuſſed in *Bot. Arr.* 149 and 1139, &c. but it does not follow that all the Valantiæ of Linnæus are of the ſame genus. V. glabra, articulata, and Aparine may be ſo, but ſurely V. muralis ought from its fruit to form a genus. It is to be wiſhed that and other foreign ſpecies ſhould be well examined as to their fructification, which appears in ſome reſpects to be very curious.

As the old name Cruciata is in fact an adjective, we have ventured to conſider it as ſuch, to avoid jarring terminations. See Remarks on Lathyrus Niſſolia, t. 112.

SPLACHNUM ampullaceum.

Purple Splachnum.

CRYPTOGAMIA Muſci.

GEN. CHAR. *Capſule* placed on the ſummit of a large coloured fleſhy receptacle. *Veil* deciduous. Male flowers generally on a ſeparate plant.

SPEC. CHAR. Receptacle ſwelling, obconical. Leaves ſerrated, acute.

SYN. Splachnum ampullaceum. *Linn. Sp. Pl.* 1572. *Hudſ. Fl. An.* 468. *With. Bot. Arr. v.* 3. 78. *Relh. Cant.* 396.

Bryum erectis gigantinis capitulis, foliis Serpylli pellucidis acutis. *Raii Syn.* 93.

B. ampullaceum, foliis Thymi pellucidis, collo ſtrictiore. *Dill. Muſc.* 343. *t.* 44. *f.* 3. (compared at Oxford, *J. E. Smith.)*

GATHERED on Iver Heath near Uxbridge by Mr. Jacob Rayer, Auguſt 24 laſt, though it commonly bears its capſules in the ſpring.

The roots are ſaid to be annual, and produce numerous ſhort upright branches, clothed with lanceolate leaves, various in breadth, ſharply pointed, ſerrated, pale and pellucid. Some branches are terminated by a ſtellated male flower. Others bear the capſule on a ſtraight upright flower-ſtalk, which gradually riſes to the height of two inches, and is round, ſmooth, pellucid, of a bright red. This ſtalk terminates in an obovate or conical purpliſh ſucculent body, compared by Dillenius to a vinegar cruet, on the blunt top of which ſtands a ſmall cylindrical capſule, with eight teeth round its oriſice, which at length are reflexed. The veil or calyptra is very minute and fugacious; the lid of the capſule ſmall and blunt. The columella is lengthened out beyond the rim of the capſule, appearing like a piſtillum, which it may really be.

Linnæus, too confident in Dillenius, who was a better obſerver than phyſiologiſt, took the capſule of Moſſes for their anthera; but the celebrated Hedwig has now ſet us right in that particular.

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